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COSTS OF PRODUCING SELECTED CROPS IN THE UNITED STATES—FINAL 1979, 1980, AND PRELIMINARY FOR 1981

PREPARED BY THE

ECONOMIC RESEARCH SERVICE
U.S. DEPARTMENT OF AGRICULTURE

FOR THE

COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY
UNITED STATES SENATE

JUNE 1982

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Committee on Agriculture, Nutrition, and Forestry

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FOREWORD

"Costs of Producing Selected Crops in the United States—Final 1979, 1980, and Preliminary for 1981" is the latest in a series of annual reports detailing the most up-to-date information on production costs. These studies are conducted by the U.S. Department of Agriculture in compliance with Public Law 93–86, the Agriculture and Consumer Protection Act of 1973.

In publishing this report, the Committee on Agriculture, Nutrition, and Forestry recognizes that the information contained herein will be helpful to Members of Congress in determining agricultural policy and of interest to the producers of this Nation's food and agricultural products.

JESSE HELMS,
Chairman.

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LETTER OF TRANSMITTAL

DEPARTMENT OF AGRICULTURE,
OFFICE OF THE SECRETARY,
Washington, D.C., April 21, 1982.

Hon. JESSE HELMS,
Chairman, Committee on Agriculture, Nutrition, and Forestry, U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: The U.S. Department of Agriculture herewith submits its annual report on costs of producing selected crops in the United States, as required by Public Law 93–86, the Agriculture and Consumer Protection Act of 1973. The report contains detailed estimates of regional and national average costs of production (per acre and per unit) for 11 major crops. Final cost estimates are provided for 1979 and 1980 and preliminary estimates are made for 1981.

Sincerely,

JOHN R. BLOCK, *Secretary.*

Enclosure.

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PREFACE

The U.S. Department of Agriculture conducts research on costs of production through the National Economics Division of the Economic Research Service (ERS).

Costs in this report are average estimates and do not show the range about the average. Costs can vary significantly over time, from one farm to another, and from one State and region to another. This variability is attributable to factors like climate, soil types, and the managerial skills of producers. Size of farm is also an important factor; some operators achieve efficiencies through purchasing large quantities of inputs at a discount, using resources—especially machinery—more efficiently, and securing more advantageous marketing arrangements.

The cost estimates are based on total cost accounting for all inputs. Data come from a variety of sources. Most important are the cost of production surveys that are planned and carried out jointly by ERS and the Statistical Reporting Service. The estimates in this report draw on three cost of production surveys, the data from which are updated annually with computerized methods.

Peanut costs are based on a 1978 survey of 750 producers in six States.

Costs for cotton, feedgrains, wheat, flax, sunflowers, and soybeans are based on a 1979 survey of 5,460 producers in 32 States.

Rice costs are based on a 1979 survey of 500 rice producers in six States (this was the first USDA cost of production survey of rice producers).

Many units in ERS and USDA contributed data and information. Numerous people in the land-grant universities also assisted in designing and conducting the surveys and in reviewing the enterprise budgets. Between survey years, enterprise budgets are updated using a computerized cost-estimating procedure and USDA data on crop yields and input prices.

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SUMMARY

Costs of producing the 11 major U.S. crops rose in 1981 with the largest increases in seed prices (17 percent), short-term interest rates (14 percent), and fuel prices (13 percent). Seed prices in 1981 increased primarily because of the rise in crop prices in 1980, which in many cases was due to the drought reduced 1980 harvest.

From 1980 to 1981, average variable costs per acre increased by 40 percent for peanuts, 22 percent for cotton, 15 percent for corn, sorghum, soybeans, and wheat, 11 percent for rice, flax, and sunflowers, and 9 percent for barley and oats. The large increase in peanut costs was due to the rise in peanut seed prices in 1981 of nearly 100 percent from 1980 and added costs of harvesting, hauling, and drying the 1981 peanut crop which was 71 percent larger than the 1980 crop.

The 1980 drought reduced the yields of all 11 crops, but yields rebounded in 1981. Peanut yields rose by 72 percent over 1980; cotton and sorghum yields by 45 percent; corn and sunflower by 21 percent; barley, flax, and soybeans by 14 to 19 percent; rice by 12 percent; wheat by 5 percent; and oats by 1 percent. These generally large increases in yields caused some of the increase in per-acre costs in 1981 due to the increased costs of harvesting, hauling, drying, and ginning.

Not all areas shared in the bumper 1981 crops. Barley yields fell in 1981 in the Northeast and were relatively unchanged in the Southern Plains and Southwest. Oats yields changed little in all areas. Hard Red Winter wheat yields declined by 24 percent in the Central Plains due to a late spring frost in Kansas, and also declined by 6 percent in the Southern Plains. Yields of Soft Red Winter wheat and soybeans were relatively unchanged in the Lake States-Corn Belt region.

The average cost per unit of production (excluding land) dropped for 8 of the 11 crops in 1981 because yield increases (production per acre) were greater than per-acre cost increases. The most dramatic cost reduction per unit decrease was for peanuts whose costs declined by 23 percent per pound. Sorghum costs dropped by 20 percent per bushel, cotton costs declined by 15 percent per pound, and per unit costs for sunflower, corn, barley, flax, and soybeans declined by 6 percent or less. Per-unit costs rose by less than 1 percent for rice, but rose by 9 percent for wheat and 11 percent for oats since yields of these crops failed to keep up with the rate of cost increases.

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CROP PRODUCTION COSTS, UNITED STATES[1]

ITEM	1979	1980	[2] 1981
Corn:			
Per acre, excluding land	$178.62	$212.01	$245.24
Per acre, including land	237.94	277.89	309.27
Per bushel, excluding land	1.63	2.35	2.24
Per bushel, including land	2.13	3.05	2.90
Sorghum:			
Per acre, excluding land	120.33	139.85	162.41
Per acre, including land	150.01	166.52	192.26
Per bushel, excluding land	1.96	3.24	2.58
Per bushel, including land	2.48	4.07	3.25
Barley:			
Per acre, excluding land	114.70	130.14	146.64
Per acre, including land	143.08	161.03	179.24
Per bushel, excluding land	2.40	3.01	2.97
Per bushel, including land	3.04	3.79	3.72
Value of secondary product	.09	.11	.09
Oats:			
Per acre, excluding land	86.22	101.47	113.03
Per acre, including land	113.81	137.04	150.71
Per bushel, excluding land	1.69	2.17	2.25
Per bushel, including land	2.30	2.81	3.07
Value of secondary product	.42	.55	.63
Wheat:			
Per acre, excluding land	90.98	109.38	126.06
Per acre, including land	121.71	140.55	158.38
Per bushel, excluding land	2.81	3.66	4.00
Per bushel, including land	3.74	4.81	5.21
Value of secondary product	.11	.14	.17
Rice:			
Per acre, excluding land	322.76	374.81	421.04
Per acre, including land	398.10	451.06	489.36
Per hundredweight, excluding land	7.06	8.68	8.74
Per hundredweight, including land	8.29	10.07	10.06
Soybeans:			
Per acre, excluding land	115.05	127.67	147.61
Per acre, including land	169.44	187.66	206.14
Per bushel, excluding land	3.61	4.93	4.90
Per bushel, including land	5.15	7.19	7.01
Sunflowers:			
Per acre, excluding land	90.93	104.20	118.34
Per acre, including land	116.07	130.61	147.11
Per hundredweight, excluding land	6.89	10.85	10.70
Per hundredweight, including land	8.80	13.78	12.91
Peanuts:			
Per acre, excluding land	405.85	439.24	598.77
Per acre, including land	508.34	535.08	721.76
Per pound, excluding land	.157	.288	.228
Per pound, including land	.198	.357	.275
Value of secondary product	.006	.007	.006
Flax:			
Per acre, excluding land	67.90	75.20	86.96
Per acre, including land	86.12	96.73	109.85
Per bushel, excluding land	5.14	7.37	7.19
Per bushel, including land	6.57	9.60	9.30
Cotton:			
Per acre, excluding land	317.19	346.43	420.84
Per acre, including land	361.07	383.06	462.22
Per pound, excluding land	.631	.943	.798
Per pound, including land	.721	1.060	.899
Value of secondary product	.099	.108	.070

[1] Land allocation is average of share rent, cash rent, and charge based on the acquisition value of owner-operator land.
[2] Preliminary.

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INTRODUCTION

Costs of producing 11 major U.S. farm crops in the last 3 years are presented in this report. It includes the national average cost estimates per acre and per unit of production for each crop plus estimates for the major producing regions for each crop. The 11 crops are feedgrains (corn, sorghum, barley, oats), food grains (wheat, rice), oilseeds (soybeans, sunflowers, peanuts, flax) and upland cotton.

Variations in yields are the most significant factors affecting per unit cost estimates. Yields for 1981 rebounded from the drought-reduced lows of 1980 and approached the highs of 1979 (table 1). For 1979–81, costs per unit for most crops followed a pattern opposite that of yields. Per unit costs were lower in 1979 and 1981 and substantially higher in 1980.

Costs per acre continued to rise in 1981 led by rapid increases in fuel and short-term interest costs. Fuel costs rose, partly because of higher fuel prices, but also because of increased fuel use required by larger harvests. For oats, wheat, and rice, the increase in yields in 1981 did not offset the increase in per acre costs, resulting in per unit cost increases for these three crops.

Between 1979 and 1980, fuel and energy prices, fertilizer prices, and short-term interest rates rose rapidly and contributed heavily to the large increase in 1980 production costs (table 2). In 1981, the rate of increase slowed for most inputs. Farm machinery prices, however, continued to rise at an almost constant rate. Combined with a continued rise in short-term interest rates, machinery prices contributed significantly to per acre cost increases for the 11 crops in 1981.

This report is one in a continuing program by the Economic Research Service to provide consistent estimates of the costs of producing major agricultural commodities (see list of earlier reports at the end of this publication). The costs are based on surveys of farmers and are updated each year using a computerized cost-estimating procedure (FEDS—firm enterprise data system) maintained by ERS staff at Oklahoma State University (see "cost-estimating methods" later in this report for a more complete explanation).

TABLE 1.—U.S. CROP YIELDS PER PLANTED ACRE

Crop	1979	1980	1981	1976–80 average
	Bushels			
Corn	109.6	90.1	109.4	95.2
Sorghum	61.4	43.2	63.0	51.6
Barley	47.8	43.3	49.4	43.6
Oats	50.9	49.9	50.3	49.0
Wheat	32.4	29.9	31.5	29.4
Soybeans	31.9	25.9	30.1	28.5
Flax	13.2	10.2	12.1	10.7
	Pounds			
Peanuts	2,587.0	1,526.4	2,628.5	2,318.3
Cotton	502.4	367.2	527.4	439.9
	Hundredweight			
Rice	45.7	43.2	48.2	44.9
Sunflowers	13.2	9.6	11.6	11.9

TABLE 2.—INCREASES IN INPUT PRICES

[In percent]

Item	1979-80	1980-81	1979-81
Fuels and energy	38	13	56
Farm motor supplies	17	9	28
Fertilizer	24	7	33
Tractors and self-propelled machinery	12	12	25
Agricultural chemicals	7	8	16
Other machinery	11	10	23
Wage rates	8	8	16
Autos and trucks	5	16	23
Seed	8	17	26
Farm real estate values	16	9	26
Short-term interest rates	21	14	36
Long-term interest rates	13	9	23

CORN

Per acre variable costs for corn increased by 14.6 percent from 1980 to 1981. The major factors causing the increase in 1981 were rising costs of fuel and fertilizer. Fuel costs rose by $3.14 per acre (18 percent) due primarily to rising fuel prices although higher yields in 1981 caused an increase in harvesting operations that raised fuel use and drying costs. Costs of producing corn for the United States and for the five major corn-producing regions are summarized in tables 3 through 8.

Fertilizer costs increased nationally by $5.30 per acre. Fertilizer prices rose by 7 percent in 1981. In addition, part of this increased cost was due to a record high use of nitrogen in 1981 (137 pounds per acre, up 5 percent from 1980).

In 1981, 12.4 percent of all corn raised in the United States was produced under irrigation. For irrigated corn (tables 4 through 9 include both dryland and irrigated corn) the costs of fuel and lubrication for irrigation averaged $44.89 per acre (33 cents per bushel). Hence rising fuel prices caused production costs of irrigated corn to rise more rapidly than costs for dryland corn.

Machinery ownership costs are primarily determined by machinery prices and interest rates. Increases in both of these items caused machinery ownership costs to rise by about 19 percent in both 1980 and 1981.

Returns to land depend on land prices, interest rates, yields, cash rents, and product prices. Rising land prices and interest rates caused the allocated return to land to increase each year. On the other hand, yields and product prices were highly variable, which influence returns to landownership under share lease arrangements.

Costs on a per bushel basis depend on yields. At the national level, corn yields were above the 5-year average in 1981 and below average in 1980. Thus, per bushel nonland costs rose by 72 cents in 1980 and declined by 11 cents in 1981. Variable production costs on irrigated corn in 1981 averaged $1.67 per bushel compared with $1.38 per bushel for dryland corn.

Both per acre and per bushel national average costs are heavily weighted by conditions in the Lake States-Corn Belt region since it produces about 70 percent of the corn crop. Per bushel costs in this region are generally below the national average. The Southeast region

produces only 5 to 6 percent of the national crop but has per bushel nonland costs that are 40 to 70 percent above the national average due to lower yields.

Figure 1

Corn Production Regions

States are grouped in production regions according to the cultural practices most prevalent in raising the particular crop. The boundaries of the production regions for one crop, therefore, are not necessarily the same as those for another crop.

TABLE 3.—CORN PRODUCTION COSTS, UNITED STATES

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	12.41	14.23	16.26
FERTILIZER	37.55	47.28	52.58
LIME	1.18	1.38	1.53
CHEMICALS	13.27	14.24	15.49
CUSTOM OPERATIONS	4.44	4.77	5.52
LABOR	12.03	12.98	14.92
FUEL AND LUBRICATION	12.53	17.12	20.26
REPAIRS	8.99	10.25	11.82
DRYING	6.36	6.62	8.60
PURCHASED IRRIGATION WATER	.08	.09	.10
INTEREST	4.27	6.28	7.96
TOTAL	113.11	135.24	155.04
MACHINERY OWNERSHIP:			
REPLACEMENT	23.00	25.29	28.73
INTEREST	14.29	19.61	25.11
TAXES AND INSURANCE	3.36	3.73	4.24
TOTAL	40.65	48.63	58.08
FARM OVERHEAD	8.62	8.87	9.83
MANAGEMENT	16.24	19.27	22.29
TOTAL, EXCLUDING LAND	178.62	212.01	245.24
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	107.91	133.73	138.84
COMPOSITE, ACQUISITION VALUE	59.32	65.58	64.03
		BUSHELS	
YIELD PER PLANTED ACRE	109.6	90.1	109.4
	DOLLARS PER BUSHEL		
VARIABLE	1.03	1.50	1.42
TOTAL, EXCLUDING LAND	1.63	2.35	2.24
TOTAL TO A RENTER:			
SHARE RENTER	2.43	3.67	3.40
CASH RENTER	2.18	2.93	2.83
AVERAGE RENTER	2.30	3.27	3.10
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	2.65	3.93	3.71
COMPOSITE, ACQUISITION VALUE	2.13	3.05	2.90
		PERCENT	
PRODUCTION COVERED	98.4	98.4	98.1

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 4.--CORN PRODUCTION COSTS, LAKE STATES - CORN BELT

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	12.62	14.66	16.63
FERTILIZER	40.02	51.61	55.31
LIME	1.24	1.44	1.54
CHEMICALS	14.23	15.13	16.47
CUSTOM OPERATIONS	3.95	4.31	4.94
LABOR	11.09	11.91	13.69
FUEL AND LUBRICATION	9.23	12.62	15.17
REPAIRS	7.76	8.63	9.94
DRYING	7.38	7.77	9.88
INTEREST	4.28	6.37	7.95
TOTAL	111.80	134.45	151.52
MACHINERY OWNERSHIP:			
REPLACEMENT	21.02	22.02	24.99
INTEREST	13.16	17.29	22.15
TAXES AND INSURANCE	3.22	3.45	3.89
TOTAL	37.40	42.76	51.03
FARM OVERHEAD	8.58	8.78	9.70
MANAGEMENT	15.78	18.60	21.22
TOTAL, EXCLUDING LAND	173.56	204.59	233.47
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	126.78	157.57	161.99
COMPOSITE, ACQUISITION VALUE	69.86	78.28	75.91
	BUSHELS		
YIELD PER PLANTED ACRE	116.0	98.5	115.8
	DOLLARS PER BUSHEL		
VARIABLE	.96	1.36	1.31
TOTAL, EXCLUDING LAND	1.50	2.08	2.02
TOTAL TO A RENTER:			
SHARE RENTER	2.32	3.38	3.18
CASH RENTER	2.08	2.68	2.65
AVERAGE RENTER	2.19	2.99	2.89
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	2.62	3.75	3.60
COMPOSITE, ACQUISITION VALUE	2.04	2.81	2.73
	PERCENT		
PRODUCTION COVERED	70.2	73.5	70.9

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

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TABLE 5.--CORN PRODUCTION COSTS, NORTHEAST

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	12.42	13.42	14.60
FERTILIZER	42.03	52.48	57.01
LIME	1.35	1.44	1.63
CHEMICALS	14.33	15.22	16.55
CUSTOM OPERATIONS	5.88	6.37	7.28
LABOR	13.98	14.67	16.55
FUEL AND LUBRICATION	10.00	13.25	16.00
REPAIRS	7.71	8.33	9.62
DRYING	5.71	5.95	7.47
INTEREST	4.17	5.79	7.42
TOTAL	117.58	136.97	154.13
MACHINERY OWNERSHIP:			
REPLACEMENT	19.78	21.32	24.27
INTEREST	12.28	15.88	20.96
TAXES AND INSURANCE	3.00	3.26	3.69
TOTAL	35.06	40.46	48.92
FARM OVERHEAD	17.10	18.04	19.99
MANAGEMENT	16.97	19.55	22.30
TOTAL, EXCLUDING LAND	186.71	215.02	245.34
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	79.73	98.47	115.75
COMPOSITE, ACQUISITION VALUE	39.32	44.83	52.29
	BUSHELS		
YIELD PER PLANTED ACRE	94.5	78.4	96.0
	DOLLARS PER BUSHEL		
VARIABLE	1.24	1.75	1.61
TOTAL, EXCLUDING LAND	1.48	2.74	2.56
TOTAL TO A RENTER:			
SHARE RENTER	2.98	4.52	3.83
CASH RENTER	2.33	3.23	2.95
AVERAGE RENTER	2.35	3.26	2.97
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	2.82	4.00	3.78
COMPOSITE, ACQUISITION VALUE	2.39	3.31	3.11
	PERCENT		
PRODUCTION COVERED	3.0	3.2	3.4

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 6.--CORN PRODUCTION COSTS, NORTHERN PLAINS

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	11.62	13.41	15.92
FERTILIZER	23.50	23.53	32.32
LIME	.04	.04	.05
CHEMICALS	8.84	9.53	10.25
CUSTOM OPERATIONS	3.56	3.68	4.34
LABOR	13.74	15.32	17.61
FUEL AND LUBRICATION	24.88	35.23	41.20
REPAIRS	14.42	17.88	20.82
DRYING	4.22	4.14	5.94
PURCHASED IRRIGATION WATER	.31	.36	.41
INTEREST	4.04	5.83	7.72
TOTAL	109.17	129.00	156.58
MACHINERY OWNERSHIP:			
REPLACEMENT	33.10	41.53	47.45
INTEREST	20.61	32.74	41.81
TAXES AND INSURANCE	4.30	5.40	6.30
TOTAL	58.01	79.67	95.56
FARM OVERHEAD	7.16	7.03	7.80
MANAGEMENT	17.43	21.57	25.99
TOTAL, EXCLUDING LAND	191.77	237.27	285.93
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	71.28	86.00	89.01
COMPOSITE, ACQUISITION VALUE	40.40	40.97	38.14
		BUSHELS	
YIELD PER PLANTED ACRE	105.5	79.6	106.9
	DOLLARS PER BUSHEL		
VARIABLE	1.03	1.62	1.46
TOTAL, EXCLUDING LAND	1.82	2.98	2.67
TOTAL TO A RENTER:			
SHARE RENTER	2.59	4.27	3.82
CASH RENTER	1.75	3.09	2.53
AVERAGE RENTER	2.48	4.14	3.66
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	2.54	4.27	3.79
COMPOSITE, ACQUISITION VALUE	2.17	3.56	3.19
		PERCENT	
PRODUCTION COVERED	16.4	13.9	15.2

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 7.--CORN PRODUCTION COSTS, SOUTHEAST

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	12.68	13.63	15.48
FERTILIZER	45.44	57.08	65.89
LIME	3.04	3.53	4.08
CHEMICALS	13.16	14.15	15.45
CUSTOM OPERATIONS	7.82	7.91	9.40
LABOR	12.93	13.83	16.05
FUEL AND LUBRICATION	9.58	13.86	16.80
REPAIRS	6.85	7.85	9.37
DRYING	3.89	3.44	5.12
INTEREST	4.48	6.20	8.13
TOTAL	119.87	141.48	165.77
MACHINERY OWNERSHIP:			
REPLACEMENT	18.14	19.61	22.80
INTEREST	10.46	13.58	18.07
TAXES AND INSURANCE	2.57	2.86	3.32
TOTAL	31.17	36.05	44.19
FARM OVERHEAD	8.26	8.66	9.51
MANAGEMENT	15.93	18.62	21.95
TOTAL, EXCLUDING LAND	175.23	204.81	241.42
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	64.91	74.12	81.71
COMPOSITE, ACQUISITION VALUE	34.62	34.74	37.16
	BUSHELS		
YIELD PER PLANTED ACRE	78.1	52.1	73.1
	DOLLARS PER BUSHEL		
VARIABLE	1.53	2.71	2.27
TOTAL, EXCLUDING LAND	2.24	3.93	3.30
TOTAL TO A RENTER:			
SHARE RENTER	2.89	4.90	4.19
CASH RENTER	2.82	4.80	4.05
AVERAGE RENTER	2.84	4.82	4.09
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	3.11	5.50	4.58
COMPOSITE, ACQUISITION VALUE	2.69	4.68	3.92
	PERCENT		
PRODUCTION COVERED	6.8	5.5	6.6

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 8.--CORN PRODUCTION COSTS, SOUTHWEST

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	10.64	11.11	13.64
FERTILIZER	30.60	34.94	44.68
CHEMICALS	17.34	18.92	22.04
CUSTOM OPERATIONS	9.22	10.08	11.75
LABOR	20.38	22.36	27.54
FUEL AND LUBRICATION	34.03	44.84	55.40
REPAIRS	15.41	18.59	22.08
DRYING	4.06	4.06	5.42
PURCHASED IRRIGATION WATER	1.21	1.30	1.73
INTEREST	5.35	7.71	10.39
TOTAL	148.24	173.91	214.67
MACHINERY OWNERSHIP:			
REPLACEMENT	31.53	39.54	46.97
INTEREST	19.22	28.69	37.75
TAXES AND INSURANCE	4.00	4.80	5.70
TOTAL	54.75	73.03	90.42
FARM OVERHEAD	9.14	10.23	11.65
MANAGEMENT	21.21	25.72	31.67
TOTAL, EXCLUDING LAND	233.34	282.89	348.41
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	51.20	62.49	71.97
COMPOSITE, ACQUISITION VALUE	25.34	21.09	19.12
		BUSHELS	
YIELD PER PLANTED ACRE	105.8	93.3	117.9
	DOLLARS PER BUSHEL		
VARIABLE	1.40	1.86	1.82
TOTAL, EXCLUDING LAND	2.21	3.03	2.96
TOTAL TO A RENTER:			
SHARE RENTER	2.74	3.64	3.56
CASH RENTER	2.53	3.26	3.18
AVERAGE RENTER	2.59	3.35	3.27
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	2.68	3.70	3.59
COMPOSITE, ACQUISITION VALUE	2.42	3.23	3.12
		PERCENT	
PRODUCTION COVERED	2.0	2.3	2.0

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

In 1980, costs per acre were held down somewhat by very poor yields, which reduced harvesting operations and drying costs. Variable costs for sorghum increased by 14.5 percent nationally in 1981; higher yields explained part of the cost increase. Costs of producing sorghum are summarized in tables 9 through 12.

Rising fuel prices caused most of the increase in variable costs. Fuel and lubrication costs rose by 19 percent in 1981. Machinery ownership costs also rose by 19 percent in 1981, due to rising machinery prices and short-term interest rates.

The 5-year (1976–80) national average sorghum yield per planted acre was 51.6 bushels compared with a 1980 yield of 43.2 bushels and a 1981 yield of 63 bushels. Such large variations in yields result in wide fluctuations in per bushel costs. Per bushel nonland costs rose to $3.24 in 1980, then fell to $2.58 in 1981.

Variable costs per bushel for irrigated sorghum were estimated at $1.55 compared with $1.20 for dryland—23 percent of the sorghum was produced under irrigation in 1981. The cost for fuel and lubrication to pump irrigation water averaged $28.75 per acre—31 cents per bushel. Hence, rising fuel prices place irrigated production at a competitive disadvantage.

The Central Plains region produces approximately 60 percent of the U.S. sorghum crop. This region consistently has lower per bushel production costs than the other regions. That cost advantage is partly due to the small amount of irrigated acreage—16 percent—in the Central Plains compared with 33 percent in the Southern Plains and 100 percent in the Southwest.

Figure 2

Sorghum Production Regions

States are grouped in production regions according to the cultural practices most prevalent in raising the particular crop. The boundaries of the production regions for one crop, therefore, are not necessarily the same as those for another crop.

TABLE 9.--SORGHUM PRODUCTION COSTS, UNITED STATES

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	2.49	2.74	3.23
FERTILIZER	14.87	15.62	16.45
CHEMICALS	6.22	6.70	7.28
CUSTOM OPERATIONS	2.69	2.93	3.32
LABOR	11.46	11.82	13.95
FUEL AND LUBRICATION	12.51	16.59	19.70
REPAIRS	9.34	10.52	12.14
DRYING	.93	.71	1.18
PURCHASED IRRIGATION WATER	.08	.09	.09
INTEREST	1.96	2.75	3.35
TOTAL	62.55	70.47	80.69
MACHINERY OWNERSHIP:			
REPLACEMENT	22.61	25.68	29.26
INTEREST	13.75	19.44	24.69
TAXES AND INSURANCE	3.13	3.48	4.07
TOTAL	39.49	48.60	58.02
FARM OVERHEAD	7.35	8.07	8.94
MANAGEMENT	10.94	12.71	14.76
TOTAL, EXCLUDING LAND	120.33	139.85	162.41
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	45.61	50.15	56.99
COMPOSITE, ACQUISITION VALUE	29.68	26.67	29.85
	BUSHELS		
YIELD PER PLANTED ACRE	61.4	43.2	63.0
	DOLLARS PER BUSHEL		
VARIABLE	1.02	1.63	1.28
TOTAL, EXCLUDING LAND	1.96	3.24	2.58
TOTAL TO A RENTER:			
SHARE RENTER	2.74	4.49	3.60
CASH RENTER	2.48	3.99	3.10
AVERAGE RENTER	2.69	4.40	3.51
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	2.80	4.76	3.80
COMPOSITE, ACQUISITION VALUE	2.48	4.07	3.25
	PERCENT		
PRODUCTION COVERED	97.4	97.2	96.4

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 10.--SORGHUM PRODUCTION COSTS, CENTRAL PLAINS

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	2.19	2.52	2.77
FERTILIZER	15.06	16.51	17.16
CHEMICALS	6.44	6.93	7.46
CUSTOM OPERATIONS	1.69	1.95	2.16
LABOR	9.84	10.22	11.88
FUEL AND LUBRICATION	9.68	13.42	15.90
REPAIRS	8.72	10.20	11.67
DRYING	1.05	.75	1.32
INTEREST	1.82	2.61	3.10
TOTAL	56.49	65.11	73.42
MACHINERY OWNERSHIP:			
REPLACEMENT	22.59	26.18	29.37
INTEREST	13.89	20.27	25.41
TAXES AND INSURANCE	3.22	3.67	4.26
TOTAL	39.70	50.12	59.04
FARM OVERHEAD	7.29	7.27	8.09
MANAGEMENT	10.35	12.25	14.06
TOTAL, EXCLUDING LAND	113.83	134.75	154.61
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	52.45	56.12	64.32
COMPOSITE, ACQUISITION VALUE	33.34	29.25	33.30
	BUSHELS		
YIELD PER PLANTED ACRE	68.9	45.0	66.7
	DOLLARS PER BUSHEL		
VARIABLE	.82	1.45	1.10
TOTAL, EXCLUDING LAND	1.65	2.99	2.32
TOTAL TO A RENTER:			
SHARE RENTER	2.35	4.28	3.36
CASH RENTER	2.11	4.04	2.87
AVERAGE RENTER	2.31	4.24	3.28
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	2.48	4.60	3.59
COMPOSITE, ACQUISITION VALUE	2.13	3.83	3.00
	PERCENT		
PRODUCTION COVERED	60.0	57.9	58.1

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 11.—SORGHUM PRODUCTION COSTS, SOUTHERN PLAINS

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	2.73	2.87	3.65
FERTILIZER	14.05	13.66	14.75
CHEMICALS	5.88	6.30	6.96
CUSTOM OPERATIONS	3.74	4.01	4.65
LABOR	13.09	13.49	16.30
FUEL AND LUBRICATION	15.81	20.60	24.54
REPAIRS	10.09	10.93	12.74
DRYING	.74	.59	.94
INTEREST	2.06	2.85	3.58
TOTAL	68.19	75.30	88.11
MACHINERY OWNERSHIP:			
REPLACEMENT	22.52	24.84	28.98
INTEREST	13.52	18.26	23.68
TAXES AND INSURANCE	3.02	3.22	3.80
TOTAL	39.06	46.32	56.46
FARM OVERHEAD	7.11	8.89	9.84
MANAGEMENT	11.44	13.05	15.44
TOTAL, EXCLUDING LAND	125.80	143.56	169.85
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	34.88	37.93	43.32
COMPOSITE, ACQUISITION VALUE	23.94	21.44	23.91
	BUSHELS		
YIELD PER PLANTED ACRE	51.6	39.6	57.6
	DOLLARS PER BUSHEL		
VARIABLE	1.32	1.90	1.53
TOTAL, EXCLUDING LAND	2.44	3.63	2.95
TOTAL TO A RENTER:			
SHARE RENTER	3.25	4.77	3.91
CASH RENTER	2.70	3.91	3.17
AVERAGE RENTER	3.14	4.60	3.76
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	3.24	4.93	4.00
COMPOSITE, ACQUISITION VALUE	2.98	4.41	3.58
	PERCENT		
PRODUCTION COVERED	35.9	37.0	36.9

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

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TABLE 12.—SORGHUM PRODUCTION COSTS, SOUTHWEST

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	7.33	7.61	10.14
FERTILIZER	33.97	37.80	41.19
CHEMICALS	8.64	9.18	10.01
CUSTOM OPERATIONS	9.22	10.56	11.68
LABOR	25.23	27.69	29.82
FUEL AND LUBRICATION	20.53	27.19	31.49
REPAIRS	10.19	11.86	13.31
DRYING	2.39	2.66	2.79
PURCHASED IRRIGATION WATER	6.17	6.78	7.51
INTEREST	4.46	5.91	7.36
TOTAL	128.13	147.24	165.30
MACHINERY OWNERSHIP:			
REPLACEMENT	25.93	29.40	32.93
INTEREST	15.87	21.10	25.99
TAXES AND INSURANCE	3.43	3.90	4.33
TOTAL	45.23	54.40	63.25
FARM OVERHEAD	17.70	16.06	17.74
MANAGEMENT	19.11	21.77	24.63
TOTAL, EXCLUDING LAND	210.17	239.47	270.92
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	118.26	170.36	183.76
COMPOSITE, ACQUISITION VALUE	68.11	76.61	72.49
	BUSHELS		
YIELD PER PLANTED ACRE	73.3	72.5	75.0
	DOLLARS PER BUSHEL		
VARIABLE	1.75	2.03	2.20
TOTAL, EXCLUDING LAND	2.87	3.30	3.61
TOTAL TO A RENTER:			
SHARE RENTER	3.83	4.38	4.78
CASH RENTER	3.72	4.18	4.40
AVERAGE RENTER	3.75	4.24	4.51
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	4.58	5.79	6.28
COMPOSITE, ACQUISITION VALUE	3.85	4.41	4.70
	PERCENT		
PRODUCTION COVERED	1.5	2.3	1.4

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

BARLEY

Nonland costs for barley increased by $16.50 per acre, 12.6 percent, in 1981. As with other crops, the major causes of the increase were rising prices of fuel and machinery and rising interest rates. Costs of producing barley for the United States and for the five major barley-producing regions are summarized in tables 13 through 18.

The national average barley yield set a new record in 1981—49.4 bushels per acre compared with 43.3 in 1980 and 43.6 for the 5-year average, 1976–80. Record high yields in 1981 in North Dakota and Minnesota offset lower yields in the Northwest. Yield increases in 1981 were greater than per acre cost increases resulting in marginally lower per bushel costs in 1981 than in 1980.

In the 1978 cost of production survey, small grain producers were asked to indicate the percentage of straw harvested after grain. With such data, one can estimate the straw value for small grains, a by-product of production. On a national basis the value of straw varied from 9 to 11 cents per bushel. This amount can be subtracted from total per unit costs to estimate the costs of production for grain only.

The per bushel production costs for barley and sorghum are higher than for corn even though the feed value of barley and sorghum is less than that of corn. A substantial portion of the barley crop is used for malt rather than for feed. Malt barley generally commands a higher price than feed barley.

Figure 3

Barley Production Regions

States are grouped in production regions according to the cultural practices most prevalent in raising the particular crop. The boundaries of the production regions for one crop, therefore, are not necessarily the same as those for another crop.

TABLE 13.--BARLEY PRODUCTION COSTS, UNITED STATES

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	4.94	5.76	7.31
FERTILIZER	12.88	14.30	15.27
LIME	.05	.05	.04
CHEMICALS	3.51	3.72	4.15
CUSTOM OPERATIONS	1.49	1.50	1.48
LABOR	10.78	11.25	11.74
FUEL AND LUBRICATION	10.99	14.58	15.70
REPAIRS	8.64	9.54	10.63
MISCELLANEOUS	.15	.21	.20
PURCHASED IRRIGATION WATER	1.32	1.30	1.28
INTEREST	1.46	1.96	2.35
TOTAL	56.21	64.17	70.15
MACHINERY OWNERSHIP:			
REPLACEMENT	21.87	23.33	26.50
INTEREST	13.11	17.44	21.72
TAXES AND INSURANCE	3.00	3.27	3.68
TOTAL	37.98	44.04	51.90
FARM OVERHEAD	10.08	10.10	11.26
MANAGEMENT	10.43	11.83	13.33
TOTAL, EXCLUDING LAND	114.70	130.14	146.64
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	62.54	78.60	88.51
COMPOSITE, ACQUISITION VALUE	28.38	30.89	32.60
	BUSHELS		
YIELD PER PLANTED ACRE	47.8	43.3	49.4
	DOLLARS PER BUSHEL		
VARIABLE	1.18	1.48	1.42
TOTAL, EXCLUDING LAND	2.40	3.01	2.97
TOTAL TO A RENTER:			
SHARE RENTER	3.42	4.12	4.22
CASH RENTER	3.02	4.04	3.64
AVERAGE RENTER	3.22	4.08	3.94
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	3.82	4.98	4.94
COMPOSITE, ACQUISITION VALUE	3.04	3.79	3.72
VALUE OF SECONDARY PRODUCT	.09	.11	.09
	PERCENT		
PRODUCTION COVERED	89.2	88.9	91.3

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 14.--BARLEY PRODUCTION COSTS, NORTHEAST

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	8.38	8.93	9.26
FERTILIZER	16.28	21.16	22.06
LIME	3.83	4.25	4.64
CHEMICALS	.14	.15	.16
CUSTOM OPERATIONS	5.15	5.81	6.02
LABOR	15.76	17.82	18.86
FUEL AND LUBRICATION	9.41	13.17	15.04
REPAIRS	7.18	8.35	8.97
MISCELLANEOUS	1.14	1.88	1.92
INTEREST	3.09	2.00	2.53
TOTAL	70.36	83.52	89.46
MACHINERY OWNERSHIP:			
REPLACEMENT	17.77	19.87	21.45
INTEREST	11.18	15.21	19.03
TAXES AND INSURANCE	2.67	3.04	3.24
TOTAL	31.62	38.12	43.72
FARM OVERHEAD	17.10	18.04	19.99
MANAGEMENT	11.91	13.97	15.32
TOTAL, EXCLUDING LAND	130.99	153.65	168.49
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	122.59	170.34	180.96
COMPOSITE, ACQUISITION VALUE	42.32	57.76	63.56
	BUSHELS		
YIELD PER PLANTED ACRE	44.2	46.9	47.7
	DOLLARS PER BUSHEL		
VARIABLE	1.59	1.78	1.88
TOTAL, EXCLUDING LAND	2.96	3.28	3.53
TOTAL TO A RENTER:			
SHARE RENTER	4.42	4.89	5.27
CASH RENTER	3.59	3.91	4.18
AVERAGE RENTER	3.67	3.95	4.22
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	5.75	6.93	7.35
COMPOSITE, ACQUISITION VALUE	3.93	4.52	4.88
VALUE OF SECONDARY PRODUCT	1.00	0.88	1.23
	PERCENT		
PRODUCTION COVERED	1.0	1.0	.9

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 15.—BARLEY PRODUCTION COSTS, NORTHERN PLAINS

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	4.08	4.56	6.05
FERTILIZER	12.20	12.15	12.69
CHEMICALS	2.89	3.06	3.32
CUSTOM OPERATIONS	.38	.36	.42
LABOR	8.00	8.15	9.25
FUEL AND LUBRICATION	7.97	10.38	12.33
REPAIRS	7.88	8.34	9.71
MISCELLANEOUS	.15	.21	.20
PURCHASED IRRIGATION WATER	.37	.32	.33
INTEREST	1.08	1.48	1.85
TOTAL	45.00	49.01	56.15
MACHINERY OWNERSHIP:			
REPLACEMENT	19.74	20.27	23.93
INTEREST	11.86	15.39	19.94
TAXES AND INSURANCE	2.82	2.94	3.45
TOTAL	34.42	38.60	47.32
FARM OVERHEAD	7.62	7.85	8.69
MANAGEMENT	8.70	9.55	11.21
TOTAL, EXCLUDING LAND	95.74	105.01	123.37
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	45.11	56.88	65.48
COMPOSITE, ACQUISITION VALUE	20.85	23.53	26.79
	BUSHELS		
YIELD PER PLANTED ACRE	43.6	32.3	45.4
	DOLLARS PER BUSHEL		
VARIABLE	1.03	1.52	1.24
TOTAL, EXCLUDING LAND	2.20	3.25	2.72
TOTAL TO A RENTER:			
SHARE RENTER	3.21	4.67	3.96
CASH RENTER	2.81	4.42	3.45
AVERAGE RENTER	2.98	4.53	3.68
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	3.31	5.17	4.30
COMPOSITE, ACQUISITION VALUE	2.71	4.07	3.39
VALUE OF SECONDARY PRODUCT	.11	.15	.10
	PERCENT		
PRODUCTION COVERED	48.5	41.4	51.9

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 16.--BARLEY PRODUCTION COSTS, NORTHWEST

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	5.48	7.34	9.23
FERTILIZER	12.44	15.86	18.03
CHEMICALS	4.51	4.96	5.76
CUSTOM OPERATIONS	.71	.81	.90
LABOR	11.90	13.24	12.67
FUEL AND LUBRICATION	14.98	20.74	19.28
REPAIRS	11.30	13.07	13.17
MISCELLANEOUS	.12	.16	.14
PURCHASED IRRIGATION WATER	.88	.85	.78
INTEREST	1.40	2.01	2.40
TOTAL	63.72	79.04	82.36
MACHINERY OWNERSHIP:			
REPLACEMENT	28.38	31.79	33.19
INTEREST	16.75	23.34	26.68
TAXES AND INSURANCE	3.64	4.24	4.37
TOTAL	48.77	59.37	64.24
FARM OVERHEAD	11.75	12.91	14.94
MANAGEMENT	12.42	15.13	16.15
TOTAL, EXCLUDING LAND	136.66	166.45	177.69
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	73.70	91.45	104.96
COMPOSITE, ACQUISITION VALUE	27.74	32.35	33.23
	BUSHELS		
YIELD PER PLANTED ACRE	54.3	66.6	56.3
	DOLLARS PER BUSHEL		
VARIABLE	1.17	1.19	1.46
TOTAL, EXCLUDING LAND	2.52	2.50	3.16
TOTAL TO A RENTER:			
SHARE RENTER	3.39	3.22	4.17
CASH RENTER	3.04	3.11	3.75
AVERAGE RENTER	3.26	3.19	4.03
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	3.99	3.96	5.24
COMPOSITE, ACQUISITION VALUE	3.07	2.98	3.85
VALUE OF SECONDARY PRODUCT	.07	.06	.04
	PERCENT		
PRODUCTION COVERED	20.9	28.1	24.9

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 17.--BARLEY PRODUCTION COSTS, SOUTHERN PLAINS

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	4.61	5.29	5.68
FERTILIZER	13.60	18.87	19.93
CHEMICALS	3.70	4.12	4.53
CUSTOM OPERATIONS	.59	.70	.70
LABOR	18.77	20.86	21.04
FUEL AND LUBRICATION	12.60	18.64	20.11
REPAIRS	8.09	9.70	10.38
MISCELLANEOUS	.27	.44	.45
PURCHASED IRRIGATION WATER	7.33	8.90	9.91
INTEREST	1.84	2.65	3.07
TOTAL	71.40	90.17	95.80
MACHINERY OWNERSHIP:			
REPLACEMENT	20.81	24.08	26.49
INTEREST	12.73	18.91	22.11
TAXES AND INSURANCE	2.92	3.44	3.69
TOTAL	36.46	46.43	52.29
FARM OVERHEAD	7.49	9.78	10.87
MANAGEMENT	11.54	14.64	15.90
TOTAL, EXCLUDING LAND	126.89	161.20	174.86
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	58.32	78.69	90.81
COMPOSITE, ACQUISITION VALUE	25.97	29.97	32.69
		BUSHELS	
YIELD PER PLANTED ACRE	56.6	53.6	53.8
	DOLLARS PER BUSHEL		
VARIABLE	1.26	1.68	1.78
TOTAL, EXCLUDING LAND	2.24	3.00	3.25
TOTAL TO A RENTER:			
SHARE RENTER	3.22	4.30	4.66
CASH RENTER	2.78	3.61	3.99
AVERAGE RENTER	3.08	4.08	4.45
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	3.38	4.67	5.20
COMPOSITE, ACQUISITION VALUE	2.74	3.65	3.99
VALUE OF SECONDARY PRODUCT	.19	.24	.28
		PERCENT	
PRODUCTION COVERED	5.5	4.9	4.3

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 18.--BARLEY PRODUCTION COSTS, SOUTHWEST

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	7.77	9.31	11.53
FERTILIZER	16.07	20.80	22.75
CHEMICALS	5.03	5.30	5.91
CUSTOM OPERATIONS	7.72	8.77	10.25
LABOR	17.88	20.22	21.24
FUEL AND LUBRICATION	17.95	24.97	27.45
REPAIRS	8.25	9.79	10.54
MISCELLANEOUS	..06	.08	.07
PURCHASED IRRIGATION WATER	4.03	4.56	5.21
INTEREST	3.00	4.23	5.30
TOTAL	87.76	108.03	120.05
MACHINERY OWNERSHIP:			
REPLACEMENT	22.19	24.93	26.99
INTEREST	13.39	17.73	20.94
TAXES AND INSURANCE	2.87	3.24	3.42
TOTAL	38.45	45.90	51.35
FARM OVERHEAD	18.97	16.67	18.53
MANAGEMENT	14.52	17.06	19.01
TOTAL, EXCLUDING LAND	159.70	187.66	209.14
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	119.85	164.89	193.44
COMPOSITE, ACQUISITION VALUE	63.02	66.02	67.89
	BUSHELS		
YIELD PER PLANTED ACRE	53.6	56.9	56.6
	DOLLARS PER BUSHEL		
VARIABLE	1.64	1.90	2.13
TOTAL, EXCLUDING LAND	2.84	3.30	3.70
TOTAL TO A RENTER:			
SHARE RENTER	4.22	4.72	5.40
CASH RENTER	3.81	4.05	4.38
AVERAGE RENTER	4.01	4.37	4.83
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	5.42	6.43	7.42
COMPOSITE, ACQUISITION VALUE	4.28	4.55	5.03
	PERCENT		
PRODUCTION COVERED	13.2	13.5	9.3

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

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OATS

Oats are declining as a major crop in the United States. The acreage harvested in 1981 was approximately 50 percent of the 1965 level. Yields per acre have remained about the same, hence, total production of oats has been declining along with acreage cuts. Land taken out of oats has been used for other, more profitable crops such as soybeans and corn in the Corn Belt and wheat and sunflowers in the Northern Plains. Costs of producing oats in the United States and the three major producing regions are summarized in tables 19 to 22.

Total variable costs per acre increased by approximately 9 percent in 1981. Fuel and seed prices were the major factors in the cost increase. Machinery ownership costs increased by 15 percent, mainly because of the increase in interest rates. Land returns increased in 1981 by approximately 6 percent.

The 1981 oat yield was only slightly above both the 1980 yield and the recent 5-year average. The 1981 yield increased slightly in the Lake States-Corn Belt and Northern Plains regions. Thus, costs per bushel in the two major oats-producing regions were approximately $2.41 to $2.42 in 1981, after subtracting the value of straw.

Straw is an important byproduct in all the oats-producing regions, particularly the northeast where practically every acre of oat straw is harvested. Valued at the price of other hay, straw value fluctuates from year to year but is always substantial—the national average value was 42 to 63 cents per bushel of oats in 1981.

Figure 4

Oats Production Regions

States are grouped in production regions according to the cultural practices most prevalent in raising the particular crop. The boundaries of the production regions for one crop, therefore, are not necessarily the same as those for another crop.

TABLE 19.--OATS PRODUCTION COSTS, UNITED STATES

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	4.90	5.63	7.09
FERTILIZER	7.55	9.26	9.19
LIME	.93	1.08	1.07
CHEMICALS	.80	.88	.96
CUSTOM OPERATIONS	3.05	3.49	3.70
LABOR	10.69	11.64	12.55
FUEL AND LUBRICATION	7.20	10.33	11.50
REPAIRS	6.01	6.79	7.56
MISCELLANEOUS	.77	1.24	1.22
INTEREST	.92	1.38	1.70
TOTAL	42.82	51.72	56.54
MACHINERY OWNERSHIP:			
REPLACEMENT	15.25	16.60	18.37
INTEREST	9.30	12.92	15.79
TAXES AND INSURANCE	2.26	2.51	2.75
TOTAL	26.81	32.03	36.91
FARM OVERHEAD	8.75	8.50	9.30
MANAGEMENT	7.84	9.22	10.28
TOTAL, EXCLUDING LAND	86.22	101.47	113.03
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	70.28	95.84	102.33
COMPOSITE, ACQUISITION VALUE	27.59	35.57	37.68
		BUSHELS	
YIELD PER PLANTED ACRE	50.9	49.9	50.3
	DOLLARS PER BUSHEL		
VARIABLE	.84	1.04	1.12
TOTAL, EXCLUDING LAND	1.69	2.17	2.25
TOTAL TO A RENTER:			
SHARE RENTER	2.51	3.13	3.54
CASH RENTER	2.34	2.71	2.91
AVERAGE RENTER	2.41	2.86	3.14
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	3.19	4.09	4.43
COMPOSITE, ACQUISITION VALUE	2.30	2.81	3.07
VALUE OF SECONDARY PRODUCT	.42	.55	.63
		PERCENT	
PRODUCTION COVERED	87.4	86.8	84.1

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 20.--OATS PRODUCTION COSTS, LAKE STATES - CORN BELT

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	5.45	6.14	7.51
FERTILIZER	8.32	10.42	10.87
LIME	1.50	1.64	1.79
CHEMICALS	.66	.73	.80
CUSTOM OPERATIONS	2.79	3.32	3.59
LABOR	12.72	13.60	14.88
FUEL AND LUBRICATION	8.49	12.13	13.64
REPAIRS	6.61	7.56	8.44
MISCELLANEOUS	.99	1.55	1.58
INTEREST	1.05	1.55	1.93
TOTAL	48.58	58.64	65.03
MACHINERY OWNERSHIP:			
REPLACEMENT	16.65	18.36	20.32
INTEREST	10.19	14.32	17.44
TAXES AND INSURANCE	2.47	2.77	3.04
TOTAL	29.31	35.45	40.80
FARM OVERHEAD	8.78	8.12	8.97
MANAGEMENT	8.67	10.22	11.48
TOTAL, EXCLUDING LAND	95.34	112.43	126.28
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	94.48	126.05	139.12
COMPOSITE, ACQUISITION VALUE	35.36	44.85	48.50
		BUSHELS	
YIELD PER PLANTED ACRE	53.7	57.9	58.6
	DOLLARS PER BUSHEL		
VARIABLE	.90	1.01	1.11
TOTAL, EXCLUDING LAND	1.77	1.94	2.15
TOTAL TO A RENTER:			
SHARE RENTER	3.07	3.29	3.64
CASH RENTER	2.53	2.65	2.90
AVERAGE RENTER	2.70	2.85	3.13
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	3.67	4.26	4.69
COMPOSITE, ACQUISITION VALUE	2.50	2.78	3.05
VALUE OF SECONDARY PRODUCT	.46	.54	.64
		PERCENT	
PRODUCTION COVERED	50.0	57.3	50.2

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 21.--OATS PRODUCTION COSTS, NORTHEAST

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	6.16	6.90	9.25
FERTILIZER	15.97	20.38	21.31
LIME	1.65	1.79	1.93
CHEMICALS	2.88	3.06	3.33
CUSTOM OPERATIONS	6.26	6.91	7.47
LABOR	15.11	16.45	17.78
FUEL AND LUBRICATION	9.36	12.86	15.33
REPAIRS	6.89	7.68	8.54
MISCELLANEOUS	1.06	1.75	1.79
INTEREST	1.61	2.27	2.98
TOTAL	66.95	80.05	89.71
MACHINERY OWNERSHIP:			
REPLACEMENT	16.48	18.12	20.08
INTEREST	10.20	13.53	17.25
TAXES AND INSURANCE	2.51	2.80	3.06
TOTAL	29.19	34.45	40.39
FARM OVERHEAD	17.10	18.04	19.99
MANAGEMENT	11.32	13.25	15.01
TOTAL, EXCLUDING LAND	124.56	145.79	165.10
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	67.60	89.26	103.03
COMPOSITE, ACQUISITION VALUE	26.46	33.39	39.86
	BUSHELS		
YIELD PER PLANTED ACRE	56.4	57.7	57.5
	DOLLARS PER BUSHEL		
VARIABLE	1.09	1.39	1.56
TOTAL, EXCLUDING LAND	2.21	2.53	2.87
TOTAL TO A RENTER:			
SHARE RENTER	3.32	3.81	4.29
CASH RENTER	2.52	2.85	3.22
AVERAGE RENTER	2.55	2.89	3.26
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	3.42	4.09	4.68
COMPOSITE, ACQUISITION VALUE	2.69	3.11	3.57
VALUE OF SECONDARY PRODUCT	.69	.75	.94
	PERCENT		
PRODUCTION COVERED	6.9	8.1	7.5

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 22.--OATS PRODUCTION COSTS, NORTHERN PLAINS

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	3.89	4.52	6.15
FERTILIZER	4.92	4.82	4.80
CHEMICALS	.61	.61	.70
CUSTOM OPERATIONS	2.82	2.99	3.13
LABOR	7.02	7.35	8.64
FUEL AND LUBRICATION	4.98	6.83	8.10
REPAIRS	5.02	5.34	6.28
MISCELLANEOUS	.41	.63	.65
INTEREST	.62	.90	1.17
TOTAL	30.29	33.99	39.62
MACHINERY OWNERSHIP:			
REPLACEMENT	13.03	13.43	15.63
INTEREST	7.89	10.50	13.44
TAXES AND INSURANCE	1.93	2.08	2.32
TOTAL	22.85	25.93	31.39
FARM OVERHEAD	7.16	6.93	7.69
MANAGEMENT	6.03	6.68	7.87
TOTAL, EXCLUDING LAND	66.33	73.53	86.57
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	36.85	48.31	56.12
COMPOSITE, ACQUISITION VALUE	16.89	21.00	23.72
	BUSHELS		
YIELD PER PLANTED ACRE	45.9	35.2	38.6
	DOLLARS PER BUSHEL		
VARIABLE	.66	.97	1.03
TOTAL, EXCLUDING LAND	1.44	2.09	2.24
TOTAL TO A RENTER:			
SHARE RENTER	2.09	2.94	3.43
CASH RENTER	1.88	2.83	2.77
AVERAGE RENTER	2.00	2.90	3.11
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	2.33	3.62	3.85
COMPOSITE, ACQUISITION VALUE	1.86	2.77	2.94
VALUE OF SECONDARY PRODUCT	.29	.48	.52
	PERCENT		
PRODUCTION COVERED	30.5	21.4	26.4

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

Per acre variable costs for producing wheat increased by 15 percent nationally in 1981, $8.65 per acre. Approximately 35 percent of the increase, $3, was due to rising costs of fertilizer and 20 percent, $1.74, was due to rising fuel prices. Interest costs rose by 28 percent, partly because of higher costs of other inputs and partly because of higher interest rates. Costs of producing the major classes of wheat in the United States and major producing regions are summarized in tables 23 through 35.

Machinery ownership costs for wheat production rose by 16 percent in 1981. Machinery prices rose by 12 percent and the balance of the cost increase was due to rising interest rates.

U.S. wheat yields in 1981 were record highs, averaging 31.5 bushels per planted acre compared with 29.9 bushels in 1980 and the recent 5-year average of 29.4 bushels. However, the increase in yields was not as large as the increase in per acre costs, hence, the average per bushel cost increased. Total costs excluding land increased from $3.66 in 1980 to $4 per bushel in 1981.

The rate of increase in land returns depends upon the type of land tenure. On owned land, which constitutes almost 60 percent of the land used in wheat production, returns to land have risen rapidly due to rising land prices and, especially, rising interest rates. On share-rented land, returns were low in 1980 due to below-trend yields. Cash rents have gone up steadily, but at a lesser rate than returns to owned land.

Two wheat byproduct values must also be considered. Cattle grazing on winter wheat pasture is the major byproduct credit in the Hard Red Winter wheat area, primarily the Southern Plains. Straw is also an important byproduct, particularly in the Soft Red Winter wheat areas in the Northeast and Lake States-Corn Belt. In total, pasture and straw have a value of 11 to 17 cents per bushed of wheat. This value should be subtracted from total per bushel costs to estimate the cost of production for grain only.

Hard Red Winter

Costs of producing Hard Red Winter wheat are presented in tables 24 to 28 for the United States and major producing regions. Hard Red Winter wheat is the major class of wheat produced in the United States, normally making up 45 to 50 percent of the total wheat production. In 1981, however, poor yields reduced the Hard Red Winter wheat production to the point that it constituted only 40 percent of total wheat production. The major producing areas of Hard Red Winter wheat are in the Central and Southern Plains where the bulk of the wheat is produced under dryland conditions.

Variable costs of producing Hard Red Winter wheat increased by $5.82 per acre in 1981, 11 percent, led by rising fertilizer and fuel prices. Fertilizer costs rose because of increased prices in some States and fuel prices rose because of increased usage. Interest rates and machinery price increases were a major cause of higher machinery ownership costs.

Yields of Hard Red Winter wheat in 1981 were down 12.5 percent from 1980 levels. Frost in early May damaged many fields in western and northern Kansas. As a result, yields in the Central Plains dropped from 31.8 bushels in 1980 to 24.1 in 1981. Offsetting this to some extent,

however, were extremely good yields in the Northern Plains and the Southwest.

On a per bushel basis, variable costs of producing Hard Red Winter wheat increased by 47 cents in 1981. Total nonland costs rose by 95 cents per bushel from $3.47 to $4.42.

The national average value of winter pasture was 8 to 9 cents per bushel, ranging from 3 cents per bushel in the Central Plains to 25 cents in the Southern Plains. There is very little grazing potential for winter wheat in the Northern Plains. Straw is the only wheat by-product in the Southwest.

Soft Red Winter

The second major class of wheat is Soft Red Winter wheat which is raised primarily in the Lake States-Corn Belt, the Southeast, and the Northeast. Total production of Soft Red Winter wheat in the United States increased from 435 million bushels in 1980 to 673 million bushels in 1981. Yield increases were minor so most of the increase was due to expanded acreage. The acreage of winter wheat increased dramatically in the Southeast.[1] In Georgia, for example, 1.07 million acres of wheat were harvested in 1981 compared with 175,000 acres in 1979.

Costs of producing Soft Red Winter wheat are summarized in tables 29 to 32. Per acre nonland costs increased by 11 percent, $15.87, in 1981 with the major components of the cost increases being fertilizer, fuel, and interest. Fertilizer costs rose by $2.82 per acre, fuel costs by $1.51, and interest costs by $4.38.

Yields of Soft Red Winter wheat were slightly higher in 1981 than in 1980, but not high enough to offset the added costs. As a result, total nonland costs per bushel rose from $3.41 in 1980 to $3.76 in 1981.

The production of straw with Soft Red Winter wheat is a substantial source of value. Straw value is fairly high in all the Soft Red Winter wheat areas, particularly in the Northeast where virtually all wheat straw is harvested for livestock bedding. This value was estimated to average 50 cents per bushel of wheat for all Soft Red Winter wheat in 1981.

Hard Red Spring

Total nonland costs per acre of producing Hard Red Spring wheat increased by 21 percent, $19.52, in 1980 (table 33). Of this increase, $9.01 was due to the added machinery ownership costs and $2.02 was due to added fuel costs. The higher machinery ownership costs resulted primarily from increases in machinery prices and higher interest rates. Some added cost is due to additional machine use in 1981. In North Dakota, only 79 percent of the planted acres were harvested in 1980 compared with 98 percent in 1981.

Yields of Hard Red Spring wheat in 1981 were much improved over 1980. The average yield per planted acre in 1981 was 28.6 bushels compared with 18.5 bushels in 1980 and a 5-year average, 1976–80, of 24.8. This dramatic yield increase resulted in lower costs per bushel in

[1] As a result of this expanded acreage of Soft Red Winter wheat, cost of production budgets were added this year for Alabama, Georgia, Louisiana, Mississippi, and South Carolina.

1981. Total nonland costs per bushel declined from $5.05 in 1980 to $3.95 in 1981.

Durum

Approximately 80 percent of the U.S. Durum crop is produced in Minnesota, Montana, North Dakota, and South Dakota. Arizona and California had substantial increases in acreages of Durum in 1980 but costs were not estimated for these two States.

Changes in costs for Durum (table 34) parallel changes for Hard Red Spring wheat and the costs of production are very similar for the two wheats in a given State. Costs increased in 1981 due to rising prices of fuel, fertilizer, machinery prices, and interest rates. Machine use also increased, as with Hard Red Spring wheat.

Yields were considerably improved in 1981, rising from 16.7 bushels per planted acre in 1980 to 27.9 bushels in 1981. This brought a sharp reduction in per bushel costs of Durum.

The increased yield in 1981 was a factor in the increase in land returns. Under share-rental arrangements, increased yields increase the landowner's returns, which increases the land allocation.

White

Table 35 presents costs of production estimates for White wheat in Idaho, Washington, and Oregon (the costs of producing White wheat in Michigan and New York are included in the costs presented for Soft Red Winter). White wheat is grown both as a winter- and spring-planted crop, with approximately 88 percent raised as winter wheat in 1981.

Nonland costs rose by $21 per acre (14 percent) in 1981, of which $5.58 was added interest costs and $4.97 was added fertilizer costs.

Yields of White wheat continue to increase, as they have since 1976. The 1981 yield per planted acre of 55.4 bushels exceeded the 1980 yield of 52.9 and the 5-year average (1976–80) of 44 bushels. Despite the yield increase, per bushel nonland costs rose from $2.88 in 1980 to $3.13 in 1981. Land allocations rose in 1981 due to rising land prices, interest rates, and the rising returns to landowners of share-rented land.

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Figure 5

Wheat Production Regions (Winter Wheat)

States are grouped in production regions according to the cultural practices most prevalent in raising the particular crop. The boundaries of the production regions for one crop, therefore, are not necessarily the same as those for another crop.

Hard Red Winter Wheat
Soft Red Winter Wheat

Figure 6

Wheat Production Regions (Spring Wheat, Durum, and White)

States are grouped in production regions according to the cultural practices most prevalent in raising the particular crop. The boundaries of the production regions for one crop, therefore, are not necessarily the same as those for another crop.

White
White, Hard Red Spring and Durum
Durum and Hard Red Spring

TABLE 23.—WHEAT PRODUCTION COSTS, UNITED STATES

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	5.01	6.51	7.03
FERTILIZER	9.90	13.63	16.63
LIME	.16	.23	.34
CHEMICALS	2.08	2.23	2.29
CUSTOM OPERATIONS	2.68	2.95	3.28
LABOR	8.63	9.28	10.35
FUEL AND LUBRICATION	7.64	10.62	12.36
REPAIRS	6.47	7.23	8.09
MISCELLANEOUS	.14	.20	.26
PURCHASED IRRIGATION WATER	.25	.29	.29
INTEREST	2.09	3.22	4.12
TOTAL	45.05	56.39	65.04
MACHINERY OWNERSHIP:			
REPLACEMENT	16.87	18.16	20.37
INTEREST	9.97	13.51	16.63
TAXES AND INSURANCE	2.37	2.58	2.87
TOTAL	29.21	34.25	39.87
FARM OVERHEAD	8.45	8.80	9.69
MANAGEMENT	8.27	9.94	11.46
TOTAL, EXCLUDING LAND	90.98	109.38	126.06
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	59.66	69.63	76.40
COMPOSITE, ACQUISITION VALUE	30.73	31.17	32.32
	BUSHELS		
YIELD PER PLANTED ACRE	32.4	29.9	31.5
	DOLLARS PER BUSHEL		
VARIABLE	1.39	1.89	2.07
TOTAL, EXCLUDING LAND	2.81	3.66	4.00
TOTAL TO A RENTER:			
SHARE RENTER	3.96	5.08	5.96
CASH RENTER	4.06	5.55	5.14
AVERAGE RENTER	3.99	5.22	5.67
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	4.76	6.27	6.79
COMPOSITE, ACQUISITION VALUE	3.74	4.81	5.21
VALUE OF SECONDARY PRODUCT	.11	.14	.17
	PERCENT		
PRODUCTION COVERED	96.8	97.4	97.1

1/ PRELIMINARY.

2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 24.—HARD RED WINTER WHEAT PRODUCTION COSTS, UNITED STATES

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	3.65	4.90	4.96
FERTILIZER	7.21	10.22	11.90
CHEMICALS	1.36	1.49	1.66
CUSTOM OPERATIONS	3.41	3.80	4.09
LABOR	8.71	9.39	9.90
FUEL AND LUBRICATION	8.15	11.31	12.93
REPAIRS	6.35	7.23	7.90
MISCELLANEOUS	.04	.04	.04
PURCHASED IRRIGATION WATER	.22	.29	.32
INTEREST	2.15	3.42	4.21
TOTAL	41.25	52.09	57.91
MACHINERY OWNERSHIP:			
REPLACEMENT	15.77	17.49	19.09
INTEREST	9.32	13.14	15.46
TAXES AND INSURANCE	2.19	2.45	2.62
TOTAL	27.28	33.08	37.17
FARM OVERHEAD	7.49	8.42	9.34
MANAGEMENT	7.60	9.36	10.44
TOTAL, EXCLUDING LAND	83.62	102.95	114.86
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	52.80	61.68	67.02
COMPOSITE, ACQUISITION VALUE	29.24	28.80	28.25
	BUSHELS		
YIELD PER PLANTED ACRE	32.4	29.7	26.0
	DOLLARS PER BUSHEL		
VARIABLE	1.27	1.76	2.23
TOTAL, EXCLUDING LAND	2.58	3.47	4.42
TOTAL TO A RENTER:			
SHARE RENTER	3.62	4.88	6.45
CASH RENTER	3.46	4.84	5.61
AVERAGE RENTER	3.59	4.87	6.27
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	4.27	5.81	7.48
COMPOSITE, ACQUISITION VALUE	3.43	4.53	5.77
VALUE OF SECONDARY PRODUCT	.08	.10	.11
	PERCENT		
PRODUCTION COVERED	97.7	97.2	98.2

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 25.--HARD RED WINTER WHEAT PRODUCTION COSTS, CENTRAL PLAINS

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	2.98	4.11	4.20
FERTILIZER	5.73	8.29	9.33
CHEMICALS	.78	.86	.95
CUSTOM OPERATIONS	3.08	3.48	3.71
LABOR	8.00	8.32	8.44
FUEL AND LUBRICATION	7.12	9.97	11.02
REPAIRS	6.08	6.99	7.43
MISCELLANEOUS	.01	.01	.02
INTEREST	1.90	3.03	3.66
TOTAL	35.68	45.06	48.76
MACHINERY OWNERSHIP:			
REPLACEMENT	15.76	17.62	18.78
INTEREST	9.41	13.58	15.50
TAXES AND INSURANCE	2.25	2.56	2.67
TOTAL	27.42	33.76	36.95
FARM OVERHEAD	7.21	7.37	8.13
MANAGEMENT	7.03	8.62	9.38
TOTAL, EXCLUDING LAND	77.34	94.81	103.22
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	58.08	68.61	74.75
COMPOSITE, ACQUISITION VALUE	30.98	32.26	31.17
	BUSHELS		
YIELD PER PLANTED ACRE	32.6	31.8	24.1
	DOLLARS PER BUSHEL		
VARIABLE	1.09	1.42	2.02
TOTAL, EXCLUDING LAND	2.37	2.98	4.28
TOTAL TO A RENTER:			
SHARE RENTER	3.38	4.30	6.41
CASH RENTER	3.39	4.31	6.18
AVERAGE RENTER	3.38	4.30	6.40
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	4.22	5.35	7.96
COMPOSITE, ACQUISITION VALUE	3.26	4.02	5.87
VALUE OF SECONDARY PRODUCT	.03	.03	.04
	PERCENT		
PRODUCTION COVERED	52.8	55.6	47.1

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 26.--HARD RED WINTER WHEAT PRODUCTION COSTS, NORTHERN PLAINS

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	3.49	4.40	4.59
FERTILIZER	8.12	8.11	9.82
CHEMICALS	2.07	2.22	2.42
CUSTOM OPERATIONS	3.07	3.15	3.86
LABOR	5.51	6.02	6.69
FUEL AND LUBRICATION	5.95	8.62	10.39
REPAIRS	6.00	6.73	7.91
MISCELLANEOUS	.01	.01	.01
PURCHASED IRRIGATION WATER	.02	.02	.04
INTEREST	2.25	3.19	4.05
TOTAL	36.49	42.47	49.78
MACHINERY OWNERSHIP:			
REPLACEMENT	16.71	17.48	20.74
INTEREST	9.56	12.60	16.61
TAXES AND INSURANCE	2.32	2.49	2.95
TOTAL	28.59	32.57	40.30
FARM OVERHEAD	7.62	10.00	11.08
MANAGEMENT	7.27	8.50	10.12
TOTAL, EXCLUDING LAND	79.97	93.54	111.28
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	50.57	60.76	78.00
COMPOSITE, ACQUISITION VALUE	21.31	23.47	30.53
	BUSHELS		
YIELD PER PLANTED ACRE	23.1	23.1	33.3
	DOLLARS PER BUSHEL		
VARIABLE	1.58	1.84	1.49
TOTAL, EXCLUDING LAND	3.46	4.05	3.34
TOTAL TO A RENTER:			
SHARE RENTER	5.21	5.80	4.96
CASH RENTER	4.34	5.20	4.19
AVERAGE RENTER	5.11	5.74	4.87
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	5.82	6.91	5.86
COMPOSITE, ACQUISITION VALUE	4.45	5.16	4.32
VALUE OF SECONDARY PRODUCT	.01	.01	.01
	PERCENT		
PRODUCTION COVERED	6.2	6.2	9.7

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 27.—HARD RED WINTER WHEAT PRODUCTION COSTS, SOUTHERN PLAINS

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	4.20	5.39	5.28
FERTILIZER	8.38	12.45	14.75
CHEMICALS	1.64	1.74	1.93
CUSTOM OPERATIONS	3.64	3.95	4.20
LABOR	9.22	10.00	10.79
FUEL AND LUBRICATION	9.58	12.89	15.04
REPAIRS	6.61	7.38	8.19
MISCELLANEOUS	.06	.07	.07
INTEREST	2.34	3.81	4.73
TOTAL	45.67	57.68	64.98
MACHINERY OWNERSHIP:			
REPLACEMENT	14.82	16.44	18.26
INTEREST	8.65	12.02	14.45
TAXES AND INSURANCE	1.98	2.16	2.35
TOTAL	25.45	30.62	35.06
FARM OVERHEAD	7.06	8.92	9.88
MANAGEMENT	7.82	9.72	10.99
TOTAL, EXCLUDING LAND	86.00	106.94	120.91
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	40.16	43.29	45.75
COMPOSITE, ACQUISITION VALUE	24.97	20.31	19.44
	BUSHELS		
YIELD PER PLANTED ACRE	31.8	24.5	23.1
	DOLLARS PER BUSHEL		
VARIABLE	1.44	2.35	2.81
TOTAL, EXCLUDING LAND	2.70	4.36	5.23
TOTAL TO A RENTER:			
SHARE RENTER	3.80	5.99	7.22
CASH RENTER	3.31	5.16	6.16
AVERAGE RENTER	3.64	5.74	6.90
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	3.97	6.50	7.76
COMPOSITE, ACQUISITION VALUE	3.41	5.41	6.44
VALUE OF SECONDARY PRODUCT	.17	.22	.25
	PERCENT		
PRODUCTION COVERED	33.4	28.4	32.8

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 28.--HARD RED WINTER WHEAT PRODUCTION COSTS, SOUTHWEST

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	10.92	14.29	14.65
FERTILIZER	18.92	23.52	25.14
CHEMICALS	7.19	7.66	8.22
CUSTOM OPERATIONS	8.45	9.29	9.80
LABOR	27.33	29.93	31.41
FUEL AND LUBRICATION	17.83	23.38	25.18
REPAIRS	9.73	11.11	12.33
MISCELLANEOUS	.23	.25	.27
PURCHASED IRRIGATION WATER	8.49	9.46	9.97
INTEREST	4.47	6.23	7.38
TOTAL	113.56	135.12	144.35
MACHINERY OWNERSHIP:			
REPLACEMENT	25.33	27.24	30.12
INTEREST	15.46	19.85	24.13
TAXES AND INSURANCE	3.39	3.72	4.10
TOTAL	44.18	50.81	58.35
FARM OVERHEAD	18.69	16.74	18.71
MANAGEMENT	17.64	20.27	22.14
TOTAL, EXCLUDING LAND	194.07	222.94	243.55
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	120.45	154.76	166.14
COMPOSITE, ACQUISITION VALUE	77.58	80.37	79.51
	BUSHELS		
YIELD PER PLANTED ACRE	67.0	69.0	72.4
	DOLLARS PER BUSHEL		
VARIABLE	1.69	1.96	1.99
TOTAL, EXCLUDING LAND	2.90	3.23	3.36
TOTAL TO A RENTER:			
SHARE RENTER	3.94	4.36	4.58
CASH RENTER	3.94	4.34	4.30
AVERAGE RENTER	3.94	4.35	4.45
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	4.76	5.62	5.85
COMPOSITE, ACQUISITION VALUE	4.04	4.42	4.52
VALUE OF SECONDARY PRODUCT	.12	.14	.12
	PERCENT		
PRODUCTION COVERED	5.2	7.0	8.6

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 29.--SOFT RED WINTER WHEAT PRODUCTION COSTS, UNITED STATES

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	8.62	10.93	11.34
FERTILIZER	23.28	33.11	35.93
LIME	1.27	1.53	1.75
CHEMICALS	.43	.54	.67
CUSTOM OPERATIONS	2.84	3.27	3.62
LABOR	10.84	11.81	13.00
FUEL AND LUBRICATION	7.24	10.53	12.04
REPAIRS	5.66	6.45	7.16
MISCELLANEOUS	.93	1.19	1.15
INTEREST	3.14	4.68	5.84
TOTAL	64.25	84.04	92.50
MACHINERY OWNERSHIP:			
REPLACEMENT	16.41	17.55	19.33
INTEREST	9.71	12.57	15.79
TAXES AND INSURANCE	2.37	2.57	2.79
TOTAL	28.49	32.69	37.91
FARM OVERHEAD	8.91	9.05	9.80
MANAGEMENT	10.16	12.58	14.02
TOTAL, EXCLUDING LAND	111.81	138.36	154.23
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	92.57	100.84	93.67
COMPOSITE, ACQUISITION VALUE	42.79	42.50	38.71
	BUSHELS		
YIELD PER PLANTED ACRE	40.6	40.6	41.0
	DOLLARS PER BUSHEL		
VARIABLE	1.58	2.07	2.25
TOTAL, EXCLUDING LAND	2.75	3.41	3.76
TOTAL TO A RENTER:			
SHARE RENTER	4.19	5.03	5.58
CASH RENTER	4.00	4.63	4.83
AVERAGE RENTER	4.13	4.86	5.08
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	5.21	6.19	6.39
COMPOSITE, ACQUISITION VALUE	3.79	4.54	4.87
VALUE OF SECONDARY PRODUCT	.44	.44	.50
	PERCENT		
PRODUCTION COVERED	100.0	95.5	100.0

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 30.--SOFT RED WINTER WHEAT PRODUCTION COSTS, LAKE STATES - CORN BELT

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	8.52	10.72	10.69
FERTILIZER	22.80	33.98	36.17
LIME	.83	.98	1.07
CHEMICALS	.32	.34	.37
CUSTOM OPERATIONS	2.67	3.00	3.23
LABOR	10.73	11.67	12.83
FUEL AND LUBRICATION	7.16	10.18	11.30
REPAIRS	5.64	6.38	6.95
MISCELLANEOUS	1.04	1.36	1.41
INTEREST	3.05	4.71	5.82
TOTAL	62.76	83.32	89.84
MACHINERY OWNERSHIP:			
REPLACEMENT	16.67	17.70	19.29
INTEREST	9.90	12.86	16.02
TAXES AND INSURANCE	2.42	2.63	2.83
TOTAL	28.99	33.19	38.14
FARM OVERHEAD	8.51	9.01	10.02
MANAGEMENT	10.03	12.55	13.80
TOTAL, EXCLUDING LAND	110.29	138.07	151.80
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	104.13	131.08	127.57
COMPOSITE, ACQUISITION VALUE	48.32	54.64	51.15
	BUSHELS		
YIELD PER PLANTED ACRE	43.2	44.7	42.5
	DOLLARS PER BUSHEL		
VARIABLE	1.45	1.86	2.11
TOTAL, EXCLUDING LAND	2.55	3.09	3.57
TOTAL TO A RENTER:			
SHARE RENTER	4.08	4.86	5.61
CASH RENTER	3.65	4.22	4.57
AVERAGE RENTER	3.98	4.72	5.40
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	5.16	6.42	7.17
COMPOSITE, ACQUISITION VALUE	3.63	4.39	5.03
VALUE OF SECONDARY PRODUCT	.40	.36	.44
	PERCENT		
PRODUCTION COVERED	83.2	65.7	55.8

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 31.--SOFT RED WINTER WHEAT PRODUCTION COSTS, NORTHEAST

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	9.89	12.16	13.98
FERTILIZER	25.12	37.32	41.21
LIME	2.50	2.79	3.06
CHEMICALS	.10	.11	.12
CUSTOM OPERATIONS	4.67	5.28	5.81
LABOR	14.28	15.87	17.10
FUEL AND LUBRICATION	8.87	12.43	14.47
REPAIRS	6.77	7.81	8.65
MISCELLANEOUS	1.15	1.88	1.92
INTEREST	4.21	6.55	8.59
TOTAL	77.56	102.20	114.91
MACHINERY OWNERSHIP:			
REPLACEMENT	17.21	19.16	21.26
INTEREST	10.58	14.28	18.26
TAXES AND INSURANCE	2.60	2.94	3.23
TOTAL	30.39	36.38	42.75
FARM OVERHEAD	17.10	18.04	19.99
MANAGEMENT	12.51	15.66	17.76
TOTAL, EXCLUDING LAND	137.56	172.28	195.41
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	87.61	117.03	134.19
COMPOSITE, ACQUISITION VALUE	34.82	43.75	51.72
	BUSHELS		
YIELD PER PLANTED ACRE	33.3	38.2	37.2
	DOLLARS PER BUSHEL		
VARIABLE	2.33	2.68	3.09
TOTAL, EXCLUDING LAND	4.13	4.51	5.25
TOTAL TO A RENTER:			
SHARE RENTER	6.63	6.97	8.32
CASH RENTER	4.75	5.20	5.90
AVERAGE RENTER	4.83	5.28	6.01
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	6.78	7.61	8.90
COMPOSITE, ACQUISITION VALUE	5.18	5.67	6.66
VALUE OF SECONDARY PRODUCT	1.27	1.11	1.57
	PERCENT		
PRODUCTION COVERED	4.4	3.3	2.4

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 32.--SOFT RED WINTER WHEAT PRODUCTION COSTS, SOUTHEAST

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	8.65	11.18	11.98
FERTILIZER	24.72	31.08	35.31
LIME	2.73	2.40	2.50
CHEMICALS	.95	.94	1.08
CUSTOM OPERATIONS	3.02	3.55	3.96
LABOR	10.35	11.65	12.95
FUEL AND LUBRICATION	7.12	11.00	12.83
REPAIRS	5.40	6.42	7.32
MISCELLANEOUS	.47	.79	.79
INTEREST	3.22	4.41	5.69
TOTAL	66.63	83.42	94.41
MACHINERY OWNERSHIP:			
REPLACEMENT	15.07	17.10	19.26
INTEREST	8.71	11.84	15.34
TAXES AND INSURANCE	2.12	2.44	2.72
TOTAL	25.90	31.38	37.32
FARM OVERHEAD	8.29	8.14	8.90
MANAGEMENT	10.08	12.29	14.06
TOTAL, EXCLUDING LAND	110.90	135.23	154.69
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	46.66	43.25	49.21
COMPOSITE, ACQUISITION VALUE	22.35	19.95	22.52
	BUSHELS		
YIELD PER PLANTED ACRE	32.2	33.3	39.4
	DOLLARS PER BUSHEL		
VARIABLE	2.07	2.50	2.40
TOTAL, EXCLUDING LAND	3.44	4.06	3.93
TOTAL TO A RENTER:			
SHARE RENTER	5.04	5.70	5.48
CASH RENTER	4.24	4.75	4.42
AVERAGE RENTER	4.59	5.04	4.76
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	5.00	5.47	5.30
COMPOSITE, ACQUISITION VALUE	4.18	4.72	4.57
VALUE OF SECONDARY PRODUCT	.42	.55	.52
	PERCENT		
PRODUCTION COVERED	15.2	26.5	41.8

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 33.--HARD RED SPRING WHEAT PRODUCTION COSTS, UNITED STATES

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	5.40	6.70	7.85
FERTILIZER	8.25	8.85	9.78
CHEMICALS	3.04	3.35	3.62
CUSTOM OPERATIONS	1.39	1.35	1.59
LABOR	7.09	7.18	8.59
FUEL AND LUBRICATION	6.51	8.82	10.84
REPAIRS	6.47	6.84	8.31
PURCHASED IRRIGATION WATER	.01	.01	.01
INTEREST	1.21	1.74	2.18
TOTAL	39.37	44.64	52.77
MACHINERY OWNERSHIP:			
REPLACEMENT	16.96	17.09	20.97
INTEREST	10.13	13.00	17.56
TAXES AND INSURANCE	2.46	2.51	3.08
TOTAL	29.55	32.60	41.61
FARM OVERHEAD	7.57	7.54	8.35
MANAGEMENT	7.65	8.50	10.27
TOTAL, EXCLUDING LAND	84.14	93.48	113.00
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	49.60	59.08	69.62
COMPOSITE, ACQUISITION VALUE	24.38	25.24	30.32
	BUSHELS		
YIELD PER PLANTED ACRE	25.5	18.5	28.6
	DOLLARS PER BUSHEL		
VARIABLE	1.54	2.42	1.85
TOTAL, EXCLUDING LAND	3.30	5.05	3.95
TOTAL TO A RENTER:			
SHARE RENTER	5.02	7.68	6.09
CASH RENTER	4.79	7.66	5.58
AVERAGE RENTER	4.89	7.67	5.80
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	5.38	8.56	6.61
COMPOSITE, ACQUISITION VALUE	4.31	6.59	5.13
	PERCENT		
PRODUCTION COVERED	96.7	95.5	97.6

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 34.--DURUM WHEAT PRODUCTION COSTS, UNITED STATES

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	6.03	7.13	7.62
FERTILIZER	5.25	5.16	6.57
CHEMICALS	2.82	3.09	3.29
CUSTOM OPERATIONS	.77	.83	.98
LABOR	8.04	8.28	10.22
FUEL AND LUBRICATION	6.94	9.45	11.69
REPAIRS	6.99	7.46	9.05
INTEREST	1.25	1.80	2.30
TOTAL	38.09	43.20	51.72
MACHINERY OWNERSHIP:			
REPLACEMENT	17.69	18.21	22.07
INTEREST	10.65	13.92	18.58
TAXES AND INSURANCE	2.59	2.69	3.27
TOTAL	30.93	34.82	43.92
FARM OVERHEAD	7.21	7.13	7.90
MANAGEMENT	7.62	8.52	10.35
TOTAL, EXCLUDING LAND	83.85	93.67	113.89
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	53.85	60.93	69.10
COMPOSITE, ACQUISITION VALUE	28.29	28.25	31.59
	BUSHELS		
YIELD PER PLANTED ACRE	24.9	16.7	27.9
	DOLLARS PER BUSHEL		
VARIABLE	1.53	2.58	1.85
TOTAL, EXCLUDING LAND	3.37	5.60	4.08
TOTAL TO A RENTER:			
SHARE RENTER	5.37	9.07	6.65
CASH RENTER	5.16	8.84	5.96
AVERAGE RENTER	5.24	8.93	6.22
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	5.64	9.57	6.84
COMPOSITE, ACQUISITION VALUE	4.52	7.44	5.38
	PERCENT		
PRODUCTION COVERED	91.4	81.1	82.1

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 35.--WHITE WHEAT PRODUCTION COSTS, UNITED STATES

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	6.21	7.37	6.77
FERTILIZER	14.16	18.71	23.68
CHEMICALS	6.10	6.47	7.06
CUSTOM OPERATIONS	2.67	2.97	3.27
LABOR	9.27	10.20	10.88
FUEL AND LUBRICATION	8.56	12.24	13.93
REPAIRS	8.12	9.54	10.67
MISCELLANEOUS	.11	.12	.14
PURCHASED IRRIGATION WATER	1.58	1.82	1.97
INTEREST	3.02	4.39	5.56
TOTAL	59.80	73.83	83.93
MACHINERY OWNERSHIP:			
REPLACEMENT	23.63	26.46	29.48
INTEREST	13.57	18.81	23.22
TAXES AND INSURANCE	3.14	3.58	3.96
TOTAL	40.34	48.85	56.66
FARM OVERHEAD	17.04	15.68	17.28
MANAGEMENT	11.72	13.84	15.79
TOTAL, EXCLUDING LAND	128.90	152.20	173.66
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	83.30	97.40	120.46
COMPOSITE, ACQUISITION VALUE	40.27	43.35	49.64
	BUSHELS		
YIELD PER PLANTED ACRE	44.0	52.9	55.4
	DOLLARS PER BUSHEL		
VARIABLE	1.36	1.40	1.52
TOTAL, EXCLUDING LAND	2.93	2.88	3.13
TOTAL TO A RENTER:			
SHARE RENTER	4.44	4.08	4.37
CASH RENTER	3.04	3.26	3.70
AVERAGE RENTER	4.05	3.89	4.22
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	4.94	4.81	5.50
COMPOSITE, ACQUISITION VALUE	3.84	3.66	4.05
	PERCENT		
PRODUCTION COVERED	88.1	92.8	91.0

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

In 1981, the national average nonland costs for rice rose by $46.23 per acre (12 percent). Of this increase, $9.57 came from increased interest costs, $7.82 from increased fuel and lubrication costs, and $6.54 from increased drying costs. About half of the increase in drying costs was due to higher yields. Costs of producing rice for four major production regions and the United States are presented in tables 36 to 40. Cost estimates for rice are based on data obtained in a survey of producers conducted for the 1979 crop.

Rice production in the United States has increased significantly in the past 8 years. In 1973, the last year of Government acreage controls, U.S. rice growers produced 92.8 million hundredweight of rice from 2.17 million harvested acres. In 1981, rice producers grew 185.4 million hundredweight on 3.8 million harvested acres. Production doubled in these 8 years due to a 75-percent increase in acreage and a 15-percent increase in yields. During these 8 years, production increased by 93 percent in California, 175 percent in Arkansas, and 454 percent in Mississippi. Of the total U.S. increase in production, 48 percent came from Arkansas.

The region with the greatest increase was the Mississippi Delta, which includes parts of Arkansas, Mississippi, Missouri, and northeast Louisiana. This area produced only 9 percent of the U.S. rice crop in 1973 compared with 21 percent in 1981. Rice production in this area expanded not because it is a particularly low-cost area, but because it has the necessary water and land resources needed to expand rice production, and net returns from rice production have been competitive with other crops raised in the area.

Land returns declined in 1981 because over half (52 percent) of the rice acreage is leased on share rental arrangements and rice prices were lower in 1981 than they were in 1980. The decline in prices caused a reduction in returns to landowners under share rental arrangements.

The reader is cautioned that the drying charges listed do not represent drying of the complete rice crop. Drying costs are not included for rice sold as green rice. Surveyed farmers reported that the amount of rice they sold green (before being dried) ranged from none in California to 23 percent in southwest Louisiana.

Rice yields set new records in 1981. The U.S. average yield per planted acre of 48.2 hundredweight was 5 hundredweight above the 1980 yield and 3.3 hundredweight above the 1976–80 average of 44.9. With these increased yields in 1981, the cost per hundredweight was about the same as in 1980.

California continues to be the least-cost area in terms of cost per hundredweight because of significantly higher yields than in other regions. However, the type of rice grown in California is primarily a short to medium grain which usually sells at a lower price than the long grain rice grown in the other areas.

Figure 7

Rice Production Regions

States are grouped in production regions according to the cultural practices most prevalent in raising the particular crop. The boundaries of the production regions for one crop, therefore, are not necessarily the same as those for another crop.

Gulf Coast region includes southwest Louisiana and southeast Texas. Delta region includes northeast Louisiana, western Mississippi, eastern Arkansas, and Southeastern Missouri.

TABLE 36.--RICE PRODUCTION COSTS, UNITED STATES

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	23.07	28.94	29.14
FERTILIZER	28.49	36.03	39.09
CHEMICALS	21.54	22.92	24.98
CUSTOM OPERATIONS	26.16	28.89	31.98
LABOR	29.06	31.39	34.03
FUEL AND LUBRICATION	33.35	43.40	51.22
REPAIRS	16.21	18.27	20.11
DRYING	27.56	29.30	35.84
MISCELLANEOUS	.28	.26	.25
PURCHASED IRRIGATION WATER	7.83	7.91	7.91
INTEREST	6.86	9.69	11.96
TOTAL	220.41	257.00	286.51
MACHINERY OWNERSHIP:			
REPLACEMENT	37.08	40.15	44.36
INTEREST	21.10	28.49	35.79
TAXES AND INSURANCE	4.55	5.07	5.56
TOTAL	62.73	73.71	85.71
FARM OVERHEAD	10.28	10.03	10.54
MANAGEMENT	29.34	34.07	38.28
TOTAL, EXCLUDING LAND	322.76	374.81	421.04
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	97.02	110.74	109.52
COMPOSITE, ACQUISITION VALUE	75.34	76.25	68.32
	HUNDREDWEIGHT		
YIELD PER PLANTED ACRE	45.7	43.2	48.2
	DOLLARS PER HUNDREDWEIGHT		
VARIABLE	4.82	5.95	5.94
TOTAL, EXCLUDING LAND	7.06	8.68	8.74
TOTAL TO A RENTER:			
SHARE RENTER	9.22	11.28	11.32
CASH RENTER	8.43	10.22	10.08
AVERAGE RENTER	9.01	11.01	10.99
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	8.87	11.05	11.10
COMPOSITE, ACQUISITION VALUE	8.29	10.07	10.06
	PERCENT		
PRODUCTION COVERED	100.0	100.0	100.0

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 37.--RICE PRODUCTION COSTS, ARKANSAS (NON-DELTA)

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	22.23	31.74	31.76
FERTILIZER	26.48	34.51	37.83
CHEMICALS	20.33	21.61	23.54
CUSTOM OPERATIONS	19.18	21.63	23.83
LABOR	29.36	32.41	34.67
FUEL AND LUBRICATION	33.96	45.45	54.65
REPAIRS	15.31	17.42	19.36
DRYING	28.52	30.00	36.38
PURCHASED IRRIGATION WATER	.96	1.07	1.16
INTEREST	5.87	8.61	11.04
TOTAL	202.20	244.45	274.22
MACHINERY OWNERSHIP:			
REPLACEMENT	34.34	38.12	42.38
INTEREST	19.93	26.99	34.88
TAXES AND INSURANCE	4.41	4.99	5.49
TOTAL	58.68	70.10	82.75
FARM OVERHEAD	8.60	7.88	8.73
MANAGEMENT	26.95	32.24	36.57
TOTAL, EXCLUDING LAND	296.43	354.67	402.27
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	87.31	107.38	97.04
COMPOSITE, ACQUISITION VALUE	68.73	75.56	60.59
	HUNDREDWEIGHT		
YIELD PER PLANTED ACRE	43.1	41.4	45.9
	DOLLARS PER HUNDREDWEIGHT		
VARIABLE	4.69	5.91	5.98
TOTAL, EXCLUDING LAND	6.87	8.57	8.76
TOTAL TO A RENTER:			
SHARE RENTER	8.97	11.16	11.41
CASH RENTER	8.07	9.82	9.87
AVERAGE RENTER	8.77	10.86	11.07
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	8.51	10.88	11.10
COMPOSITE, ACQUISITION VALUE	7.98	9.93	10.12
	PERCENT		
PRODUCTION COVERED	24.8	28.3	29.1

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 38.--RICE PRODUCTION COSTS, CALIFORNIA

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	28.23	25.79	25.79
FERTILIZER	32.94	41.48	44.44
CHEMICALS	19.36	20.60	22.42
CUSTOM OPERATIONS	43.27	48.54	55.71
LABOR	28.14	30.92	32.77
FUEL AND LUBRICATION	18.67	25.75	28.97
REPAIRS	17.41	20.16	22.42
DRYING	30.23	37.62	45.60
PURCHASED IRRIGATION WATER	16.65	18.37	20.26
INTEREST	7.31	9.55	11.41
TOTAL	242.21	278.78	309.79
MACHINERY OWNERSHIP:			
REPLACEMENT	35.90	39.27	43.67
INTEREST	20.12	26.58	32.46
TAXES AND INSURANCE	4.51	5.07	5.57
TOTAL	60.53	70.92	81.70
FARM OVERHEAD	19.53	17.13	18.98
MANAGEMENT	32.23	36.68	41.05
TOTAL, EXCLUDING LAND	354.50	403.51	451.52
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	175.45	207.41	231.91
COMPOSITE, ACQUISITION VALUE	127.92	134.60	137.93
	HUNDREDWEIGHT		
YIELD PER PLANTED ACRE	64.8	64.0	70.8
	DOLLARS PER HUNDREDWEIGHT		
VARIABLE	3.74	4.36	4.38
TOTAL, EXCLUDING LAND	5.47	6.30	6.38
TOTAL TO A RENTER:			
SHARE RENTER	7.34	8.44	8.52
CASH RENTER	6.41	7.31	7.37
AVERAGE RENTER	7.21	8.28	8.36
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	7.85	9.26	9.55
COMPOSITE, ACQUISITION VALUE	6.98	7.92	7.98
	PERCENT		
PRODUCTION COVERED	25.8	24.9	23.4

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 39.--RICE PRODUCTION COSTS, DELTA

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	21.41	30.58	30.58
FERTILIZER	22.36	26.95	31.67
CHEMICALS	25.42	27.04	29.43
CUSTOM OPERATIONS	23.62	26.43	29.34
LABOR	26.47	27.68	30.34
FUEL AND LUBRICATION	36.47	43.54	52.06
REPAIRS	13.27	15.16	16.97
DRYING	28.63	26.73	31.33
INTEREST	6.05	8.66	11.10
TOTAL	203.70	232.77	262.82
MACHINERY OWNERSHIP:			
REPLACEMENT	31.70	35.37	39.67
INTEREST	18.90	26.10	33.54
TAXES AND INSURANCE	4.08	4.62	5.12
TOTAL	54.68	66.09	78.33
FARM OVERHEAD	8.60	9.91	8.73
MANAGEMENT	26.70	30.88	34.99
TOTAL, EXCLUDING LAND	293.68	339.65	384.87
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	70.15	79.50	83.85
COMPOSITE, ACQUISITION VALUE	45.25	41.50	38.73
	HUNDREDWEIGHT		
YIELD PER PLANTED ACRE	41.1	36.8	41.4
	DOLLARS PER HUNDREDWEIGHT		
VARIABLE	4.96	6.33	6.36
TOTAL, EXCLUDING LAND	7.15	9.23	9.30
TOTAL TO A RENTER:			
SHARE RENTER	9.69	12.50	12.59
CASH RENTER	7.80	9.96	9.98
AVERAGE RENTER	8.71	11.19	11.24
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	8.61	11.30	11.37
COMPOSITE, ACQUISITION VALUE	7.93	10.14	10.14
	PERCENT		
PRODUCTION COVERED	18.2	17.7	20.6

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 40.--RICE PRODUCTION COSTS, GULF COAST

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	21.99	26.98	27.07
FERTILIZER	31.22	40.37	43.52
CHEMICALS	21.33	22.69	24.24
CUSTOM OPERATIONS	24.01	26.91	29.71
LABOR	30.83	33.06	37.08
FUEL AND LUBRICATION	38.62	50.54	59.07
REPAIRS	17.96	20.03	22.19
DRYING	24.87	26.03	33.66
MISCELLANEOUS	.78	.80	.85
PURCHASED IRRIGATION WATER	12.90	13.73	14.65
INTEREST	7.83	11.39	13.92
TOTAL	232.34	272.53	305.96
MACHINERY OWNERSHIP:			
REPLACEMENT	42.82	45.47	50.65
INTEREST	23.73	32.33	40.38
TAXES AND INSURANCE	4.94	5.43	5.98
TOTAL	71.49	83.23	97.01
FARM OVERHEAD	7.74	8.41	9.29
MANAGEMENT	31.16	36.42	41.23
TOTAL, EXCLUDING LAND	342.73	400.59	453.49
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	79.30	83.95	76.85
COMPOSITE, ACQUISITION VALUE	70.44	68.95	62.61
	HUNDREDWEIGHT		
YIELD PER PLANTED ACRE	40.3	38.4	44.1
	DOLLARS PER HUNDREDWEIGHT		
VARIABLE	5.77	7.10	6.94
TOTAL, EXCLUDING LAND	8.50	10.43	10.28
TOTAL TO A RENTER:			
SHARE RENTER	10.45	12.96	12.70
CASH RENTER	9.68	11.59	11.23
AVERAGE RENTER	10.25	12.60	12.33
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	10.27	12.72	12.38
COMPOSITE, ACQUISITION VALUE	9.98	12.21	11.96
	PERCENT		
PRODUCTION COVERED	31.2	29.1	26.9

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

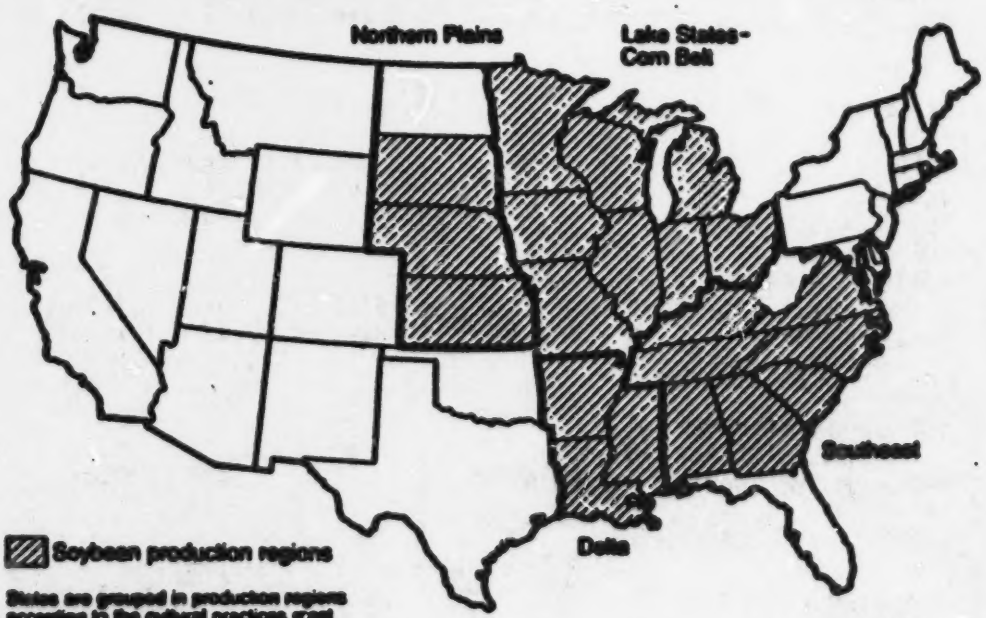
Variable costs of producing soybeans have not risen as rapidly as those for most other crops since soybeans use less fertilizer and require practically no drying. Both of those items have contributed substantially to cost increases in other crops. Seed costs of soybeans actually dropped in 1980 due to declining soybean prices for the 1979 crop. This served to offset some of the cost increases of other items that year. However, the major cause of increased variable costs in 1981 was a rise in seed prices. Seed costs rose by 35 percent as a result of higher prices received for soybeans produced in 1980. Costs of producing soybeans for the United States and four major producing regions are summarized in tables 41 through 45.

Soybean yields rebounded to 30.1 bushels per planted acre in 1981 from very low levels in 1980. The 1981 increase in yields was sufficient to offset cost increases so that per bushel costs in 1981 were similar to those of 1980.

Cost differences between regions were substantial. The Lake States-Corn Belt region, which produces 60 to 70 percent of the Nation's soybeans, had the lowest nonland cost per bushel in 1980, while the Northern Plains had the lowest nonland costs in 1979 and 1981. Nonland costs were considerably higher in both the delta and the Southeast. Returns to land were the opposite—more than twice as high in the Lake States-Corn Belt region as in the delta or Southeast.

Figure 8

Soybean Production Regions



States are grouped in production regions according to the cultural practices most prevalent in raising the particular crop. The boundaries of the production regions for one crop, therefore, are not necessarily the same as those for another crop.

TABLE 41.--SOYBEANS PRODUCTION COSTS, UNITED STATES

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	9.19	7.87	10.63
FERTILIZER	6.49	8.14	8.57
LIME	1.00	1.22	1.34
CHEMICALS	12.78	13.64	14.73
CUSTOM OPERATIONS	2.59	2.85	3.15
LABOR	13.67	14.58	16.16
FUEL AND LUBRICATION	8.89	12.23	14.36
REPAIRS	6.77	7.37	8.34
INTEREST	2.51	3.33	4.34
TOTAL	63.89	71.23	81.62
MACHINERY OWNERSHIP:			
REPLACEMENT	18.62	19.37	21.85
INTEREST	11.00	14.19	18.20
TAXES AND INSURANCE	2.66	2.82	3.16
TOTAL	32.28	36.38	43.21
FARM OVERHEAD	8.42	8.45	9.36
MANAGEMENT	10.46	11.61	13.42
TOTAL, EXCLUDING LAND	115.05	127.67	147.61
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	93.25	114.14	117.19
COMPOSITE, ACQUISITION VALUE	54.39	59.99	58.53
	BUSHELS		
YIELD PER PLANTED ACRE	31.9	25.9	30.1
	DOLLARS PER BUSHEL		
VARIABLE	2.00	2.75	2.71
TOTAL, EXCLUDING LAND	3.61	4.93	4.90
TOTAL TO A RENTER:			
SHARE RENTER	5.51	7.54	7.54
CASH RENTER	5.62	8.27	7.53
AVERAGE RENTER	5.56	7.88	7.54
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	6.59	9.69	9.33
COMPOSITE, ACQUISITION VALUE	5.15	7.19	7.01
	PERCENT		
PRODUCTION COVERED	96.6	97.1	97.0

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 42.--SOYBEANS PRODUCTION COSTS, DELTA

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	10.36	7.87	12.35
FERTILIZER	5.59	7.38	9.45
LIME	.65	.79	.80
CHEMICALS	15.58	16.74	18.18
CUSTOM OPERATIONS	1.91	2.16	2.37
LABOR	15.35	16.05	17.52
FUEL AND LUBRICATION	11.63	15.61	18.87
REPAIRS	8.35	9.05	10.31
INTEREST	3.08	4.05	5.59
TOTAL	72.50	79.70	95.44
MACHINERY OWNERSHIP:			
REPLACEMENT	20.36	21.21	24.27
INTEREST	11.56	14.86	19.70
TAXES AND INSURANCE	2.75	2.89	3.30
TOTAL	34.67	38.96	47.27
FARM OVERHEAD	8.60	7.88	8.73
MANAGEMENT	11.58	12.65	15.14
TOTAL, EXCLUDING LAND	127.35	139.19	166.58
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	50.94	58.66	62.89
COMPOSITE, ACQUISITION VALUE	32.92	30.25	30.71
	BUSHELS		
YIELD PER PLANTED ACRE	27.9	15.8	21.0
	DOLLARS PER BUSHEL		
VARIABLE	2.60	5.04	4.54
TOTAL, EXCLUDING LAND	4.56	8.81	7.93
TOTAL TO A RENTER:			
SHARE RENTER	6.08	11.41	10.58
CASH RENTER	5.75	11.46	9.47
AVERAGE RENTER	5.90	11.44	9.98
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	6.40	12.90	11.34
COMPOSITE, ACQUISITION VALUE	5.70	10.95	9.68
	PERCENT		
PRODUCTION COVERED	15.7	10.8	11.8

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 43.—SOYBEANS PRODUCTION COSTS, LAKE STATES - CORN BELT

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	8.95	8.09	10.26
FERTILIZER	4.68	5.75	6.06
LIME	.70	.82	.91
CHEMICALS	11.51	12.24	13.30
CUSTOM OPERATIONS	2.21	2.49	2.75
LABOR	13.02	14.09	15.64
FUEL AND LUBRICATION	7.91	10.80	12.57
REPAIRS	6.42	7.04	7.88
INTEREST	2.14	2.85	3.70
TOTAL	57.54	64.17	73.07
MACHINERY OWNERSHIP:			
REPLACEMENT	18.83	19.53	21.82
INTEREST	11.33	14.69	18.58
TAXES AND INSURANCE	2.76	2.92	3.23
TOTAL	32.92	37.14	43.63
FARM OVERHEAD	8.54	8.93	9.90
MANAGEMENT	9.90	11.02	12.66
TOTAL, EXCLUDING LAND	108.90	121.26	139.26
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	123.24	157.14	157.91
COMPOSITE, ACQUISITION VALUE	71.10	83.41	78.96
		BUSHELS	
YIELD PER PLANTED ACRE	35.3	33.2	34.8
	DOLLARS PER BUSHEL		
VARIABLE	1.63	1.93	2.10
TOTAL, EXCLUDING LAND	3.08	3.65	4.00
TOTAL TO A RENTER:			
SHARE RENTER	5.36	6.56	7.08
CASH RENTER	5.19	5.75	6.28
AVERAGE RENTER	5.29	6.24	6.77
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	6.66	8.58	9.16
COMPOSITE, ACQUISITION VALUE	4.82	5.82	6.33
		PERCENT	
PRODUCTION COVERED	60.8	69.7	63.1

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 44.--SOYBEANS PRODUCTION COSTS, NORTHERN PLAINS

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	8.39	7.26	9.33
FERTILIZER	1.33	2.92	1.83
LIME	.57	.62	.65
CHEMICALS	6.11	6.53	7.12
CUSTOM OPERATIONS	1.52	1.54	1.71
LABOR	12.44	13.20	14.88
FUEL AND LUBRICATION	7.52	11.13	13.32
REPAIRS	5.45	6.31	7.43
INTEREST	1.57	2.25	2.76
TOTAL	44.90	51.76	59.03
MACHINERY OWNERSHIP:			
REPLACEMENT	14.77	16.74	19.40
INTEREST	9.14	13.35	17.16
TAXES AND INSURANCE	2.21	2.50	2.92
TOTAL	26.12	32.59	39.48
FARM OVERHEAD	7.13	6.83	7.57
MANAGEMENT	7.82	9.12	10.61
TOTAL, EXCLUDING LAND	85.97	100.30	116.69
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	62.10	70.68	82.81
COMPOSITE, ACQUISITION VALUE	39.27	40.27	46.31
	BUSHELS		
YIELD PER PLANTED ACRE	30.3	23.3	33.8
	DOLLARS PER BUSHEL		
VARIABLE	1.48	2.22	1.75
TOTAL, EXCLUDING LAND	2.83	4.30	3.45
TOTAL TO A RENTER:			
SHARE RENTER	4.16	6.18	4.97
CASH RENTER	3.27	4.55	3.93
AVERAGE RENTER	3.91	5.72	4.66
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	4.71	7.31	5.94
COMPOSITE, ACQUISITION VALUE	3.83	5.78	4.67
	PERCENT		
PRODUCTION COVERED	5.2	5.4	7.4

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 45.--SOYBEANS PRODUCTION COSTS, SOUTHEAST

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	9.00	7.44	10.61
FERTILIZER	14.35	17.23	17.42
LIME	2.39	2.91	3.28
CHEMICALS	15.83	16.95	18.41
CUSTOM OPERATIONS	4.71	4.91	5.53
LABOR	14.28	15.07	16.91
FUEL AND LUBRICATION	9.59	13.48	15.86
REPAIRS	6.64	7.12	8.19
INTEREST	3.35	4.37	5.62
TOTAL	80.14	89.48	101.83
MACHINERY OWNERSHIP:			
REPLACEMENT	17.37	18.04	20.59
INTEREST	10.02	12.43	16.15
TAXES AND INSURANCE	2.44	2.57	2.92
TOTAL	29.83	33.04	39.66
FARM OVERHEAD	8.29	8.09	9.00
MANAGEMENT	11.83	13.06	15.05
TOTAL, EXCLUDING LAND	130.09	143.67	165.54
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	54.41	57.29	60.32
COMPOSITE, ACQUISITION VALUE	29.99	27.36	28.77
		BUSHELS	
YIELD PER PLANTED ACRE	26.0	15.1	23.2
	DOLLARS PER BUSHEL		
VARIABLE	3.08	5.93	4.39
TOTAL, EXCLUDING LAND	5.00	9.51	7.14
TOTAL TO A RENTER:			
SHARE RENTER	6.50	11.68	9.18
CASH RENTER	6.39	12.48	8.83
AVERAGE RENTER	6.41	12.28	8.92
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	7.14	13.61	9.93
COMPOSITE, ACQUISITION VALUE	6.15	11.51	8.49
		PERCENT	
PRODUCTION COVERED	14.9	11.2	14.6

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

SUNFLOWERS

Three States—Minnesota, North Dakota, and South Dakota—produce approximately 99 percent of the U.S. sunflower crop. Both oil and nonoil varieties in those three States are represented by these cost estimates. Estimates of the costs of producing sunflowers (table 46) are based on data obtained in the 1979 survey.

Per acre variable costs increased by about $6 in 1981 (11 percent) as a result of increases in all items. The biggest percentage increase was in drying costs and the biggest dollar increase was for fuel and lubrication. Drying costs increased by 29 percent, chiefly because of a 21-percent increase in sunflower yields.

Figure 9

Sunflower Production Region

States are grouped in production regions according to the cultural practices most prevalent in raising the particular crop. The boundaries of the production regions for one crop, therefore, are not necessarily the same as those for another crop.

TABLE 46.--SUNFLOWER PRODUCTION COSTS, UNITED STATES

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	5.53	5.82	6.38
FERTILIZER	9.18	11.44	11.45
CHEMICALS	6.50	6.88	7.32
CUSTOM OPERATIONS	1.98	2.19	2.59
LABOR	6.67	7.11	8.15
FUEL AND LUBRICATION	6.57	9.24	10.90
REPAIRS	5.85	6.57	7.73
DRYING	2.11	1.61	2.08
INTEREST	1.59	2.33	2.78
TOTAL	45.98	53.19	59.18
MACHINERY OWNERSHIP:			
REPLACEMENT	16.56	17.91	20.32
INTEREST	10.07	13.96	17.34
TAXES AND INSURANCE	2.44	2.68	3.03
TOTAL	29.07	34.55	40.69
FARM OVERHEAD	7.61	6.99	7.71
MANAGEMENT	8.27	9.47	10.76
TOTAL, EXCLUDING LAND	90.93	104.20	118.34
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	40.86	48.37	52.68
COMPOSITE, ACQUISITION VALUE	25.14	26.41	28.77
	HUNDREDWEIGHT		
YIELD PER PLANTED ACRE	13.2	9.6	11.6
	DOLLARS PER HUNDREDWEIGHT		
VARIABLE	3.48	5.54	5.10
TOTAL, EXCLUDING LAND	6.89	10.85	10.20
TOTAL TO A RENTER:			
SHARE RENTER	9.44	15.03	14.08
CASH RENTER	9.47	14.62	13.39
AVERAGE RENTER	9.46	14.80	13.69
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	10.13	16.31	15.19
COMPOSITE, ACQUISITION VALUE	8.80	13.78	12.91
	PERCENT		
PRODUCTION COVERED	98.8	98.8	99.2

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

PEANUTS

The 1981 peanut yield per acre set a new record. Total production was slightly less than in 1979, however, because of reduced acreage in the Southwest. Estimates of the costs of producing peanuts for the United States and three major production regions are summarized in tables 47 through 50.

Peanut production dropped sharply in all producing areas in 1980 because of the widespread drought. Yields were 33 percent lower in the Virginia-North Carolina area and about 43 percent lower in the Southeast and Southern Plains. At the national level, the 1980 peanut crop was the smallest since 1964. The U.S. average yield per planted acre in 1980 dropped to 1,526 pounds, almost 800 pounds below the 5-year, 1976–80 average.

The low yields in 1980 caused seed prices for 1981 to double. This, by far, was the biggest factor in the 1981 cost increases. Another major increase in 1981 occurred in drying costs, due primarily to the yield increases.

The large yield increase in 1981 resulted in reduced costs per pound for land and nonland items in all producing regions. The Southern Plains remained the high-cost region. In this region, costs of producing peanuts under dryland conditions are higher than with irrigation. For 1981, total nonland costs per pound are estimated at 28.8 cents for irrigated peanuts and 34.9 cents for dryland peanuts. Nonland production costs, on a per acre basis for irrigated peanuts, are nearly double those of dryland production, but yields of irrigated peanuts averaged 2,375 pounds compared with 1,021 pounds on dryland.

The Agriculture and Food Act of 1981 specifies that the 1982 support price for peanuts must be equivalent to the cost of production including the cost of land on a current value basis but not less than 27.5 cents per pound. The national average cost of land on a current value basis is estimated at $62.84 for 1979, $72.31 for 1980, and $85.87 for 1981. These costs include the interest at Federal land bank rates and taxes on land valued at current prices. For 1981, the national average price of land used for peanuts was $869 per acre. These estimates are lower than the composite with current value given in table 47 because the composite includes land that was cash or share rented and the rental rates include the cost of renting peanut allotments as well as the cost of renting the land.

Figure 10

Peanuts Production Regions

States are grouped in production regions according to the cultural practices most prevalent in raising the particular crop. The boundaries of the production regions for one crop, therefore, are not necessarily the same as those for another crop.

TABLE 47.--PEANUTS PRODUCTION COSTS, UNITED STATES

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	57.95	66.70	131.66
FERTILIZER	19.96	22.64	24.45
LIME	18.41	20.28	24.42
CHEMICALS	65.29	70.15	78.91
CUSTOM OPERATIONS	4.81	4.68	5.98
LABOR	35.83	36.83	42.80
FUEL AND LUBRICATION	31.14	40.74	49.10
REPAIRS	21.64	23.10	27.51
DRYING	33.63	22.02	42.03
INTEREST	9.81	13.10	20.51
TOTAL	298.47	320.24	447.37
MACHINERY OWNERSHIP:			
REPLACEMENT	36.08	39.02	46.04
INTEREST	21.40	27.33	36.49
TAXES AND INSURANCE	5.01	5.30	6.32
TOTAL	62.49	71.65	88.85
FARM OVERHEAD	7.99	7.42	8.12
MANAGEMENT	36.90	39.93	54.43
TOTAL, EXCLUDING LAND	405.85	439.24	598.77
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	115.97	113.05	142.77
COMPOSITE, ACQUISITION VALUE	102.49	95.84	122.99
	POUNDS		
YIELD PER PLANTED ACRE	2587.0	1526.4	2628.5
	DOLLARS PER POUND		
VARIABLE	0.115	0.210	0.170
TOTAL, EXCLUDING LAND	.157	.288	.228
TOTAL TO A RENTER:			
SHARE RENTER	.209	.415	.316
CASH RENTER	.229	.374	.284
AVERAGE RENTER	.211	.380	.288
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	.203	.369	.283
COMPOSITE, ACQUISITION VALUE	.198	.357	.275
VALUE OF SECONDARY PRODUCT	.006	.007	.006
	PERCENT		
PRODUCTION COVERED	98.2	98.1	98.2

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 48.--PEANUTS PRODUCTION COSTS, SOUTHEAST

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	66.02	76.21	144.23
FERTILIZER	25.50	28.78	30.73
LIME	22.91	25.68	29.40
CHEMICALS	81.85	87.08	94.87
CUSTOM OPERATIONS	5.27	5.50	6.55
LABOR	34.71	35.52	42.00
FUEL AND LUBRICATION	29.07	39.03	47.11
REPAIRS	21.66	23.04	39.34
DRYING	36.97	22.62	27.23
INTEREST	11.99	15.77	24.01
TOTAL	335.95	359.23	485.47
MACHINERY OWNERSHIP:			
REPLACEMENT	35.40	36.75	43.19
INTEREST	20.68	25.41	34.09
TAXES AND INSURANCE	4.99	5.19	6.11
TOTAL	61.07	67.35	83.39
FARM OVERHEAD	8.46	5.67	6.28
MANAGEMENT	40.55	43.23	57.51
TOTAL, EXCLUDING LAND	446.03	475.48	632.65
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	150.08	149.41	168.74
COMPOSITE, ACQUISITION VALUE	138.38	134.02	151.44
	POUNDS		
YIELD PER PLANTED ACRE	3095.0	1759.8	2879.9
	DOLLARS PER POUND		
VARIABLE	0.109	0.204	0.169
TOTAL, EXCLUDING LAND	.144	.270	.220
TOTAL TO A RENTER:			
SHARE RENTER	.201	.398	.282
CASH RENTER	.206	.377	.289
AVERAGE RENTER	.205	.378	.289
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	.195	.360	.279
COMPOSITE, ACQUISITION VALUE	.191	.351	.272
VALUE OF SECONDARY PRODUCT	.005	.006	.006
	PERCENT		
PRODUCTION COVERED	62.2	60.8	61.2

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 49.--PEANUTS PRODUCTION COSTS, SOUTHERN PLAINS

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	41.33	49.25	109.98
FERTILIZER	13.95	16.40	16.77
LIME	.08	.11	.08
CHEMICALS	30.28	32.43	36.43
CUSTOM OPERATIONS	4.89	4.02	6.13
LABOR	40.31	41.80	49.89
FUEL AND LUBRICATION	42.03	52.68	65.68
REPAIRS	24.23	25.59	31.80
DRYING	18.49	12.11	20.00
INTEREST	5.89	8.55	13.50
TOTAL	221.48	242.94	350.26
MACHINERY OWNERSHIP:			
REPLACEMENT	39.78	46.17	57.29
INTEREST	23.67	32.13	44.05
TAXES AND INSURANCE	5.13	5.48	6.86
TOTAL	68.58	83.78	108.20
FARM OVERHEAD	7.03	8.87	9.83
MANAGEMENT	29.71	33.56	46.83
TOTAL, EXCLUDING LAND	326.80	369.15	515.12
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	57.68	48.13	58.42
COMPOSITE, ACQUISITION VALUE	41.73	28.33	33.55
	POUNDS		
YIELD PER PLANTED ACRE	1820.0	1049.5	1675.1
	DOLLARS PER POUND		
VARIABLE	0.122	0.231	0.209
TOTAL, EXCLUDING LAND	.180	.352	.308
TOTAL TO A RENTER:			
SHARE RENTER	.240	.454	.402
CASH RENTER	.200	.380	.324
AVERAGE RENTER	.218	.412	.358
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	.212	.405	.351
COMPOSITE, ACQUISITION VALUE	.202	.384	.334
VALUE OF SECONDARY PRODUCT	.010	.013	.013
	PERCENT		
PRODUCTION COVERED	20.1	18.8	14.9

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 50.--PEANUTS PRODUCTION COSTS, VIRGINIA AND NORTH CAROLINA

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	61.04	65.29	121.41
FERTILIZER	13.39	14.17	15.42
LIME	34.81	35.01	39.92
CHEMICALS	73.11	77.79	84.41
CUSTOM OPERATIONS	3.31	3.25	4.13
LABOR	31.89	33.16	36.37
FUEL AND LUBRICATION	19.62	27.69	34.39
REPAIRS	17.39	19.54	23.01
DRYING	48.26	35.27	77.29
INTEREST	9.71	12.18	18.84
TOTAL	312.53	323.35	455.19
MACHINERY OWNERSHIP:			
REPLACEMENT	32.13	34.84	40.50
INTEREST	19.84	25.64	34.20
TAXES AND INSURANCE	4.89	5.39	6.26
TOTAL	56.86	65.87	80.96
FARM OVERHEAD	8.14	10.31	11.42
MANAGEMENT	37.75	39.95	54.76
TOTAL, EXCLUDING LAND	415.28	439.48	602.33
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	109.71	105.09	170.60
COMPOSITE, ACQUISITION VALUE	95.00	86.52	149.78
	POUNDS		
YIELD PER PLANTED ACRE	2332.0	1566.6	3067.3
	DOLLARS PER POUND		
VARIABLE	0.134	0.206	0.148
TOTAL, EXCLUDING LAND	.178	.281	.196
TOTAL TO A RENTER:			
SHARE RENTER	.235	.372	.268
CASH RENTER	.229	.358	.249
AVERAGE RENTER	.230	.362	.251
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	.227	.363	.248
COMPOSITE, ACQUISITION VALUE	.220	.349	.241
VALUE OF SECONDARY PRODUCT	.003	.004	.003
	PERCENT		
PRODUCTION COVERED	15.9	18.5	22.1

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

FLAX

In recent years nearly 100 percent of the U.S. flax has been produced in Minnesota, North Dakota, and South Dakota. The U.S. acreage of flax has fallen dramatically in recent years. In 1970, 2,950,000 acres were planted; the acreage dropped to 1,410,000 in 1979, and to 645,000 in 1981. The costs of producing flax are shown in table 51.

Nonland costs rose by $11.76 per acre in 1981, the major increases coming from rising machinery prices and short-term interest rates.

Yields increased in 1981 by 18.6 percent compared with increases in nonland costs of 15.6 percent. Hence, costs per bushel declined in 1981.

Figure 11

Flax Production Region

States are grouped in production regions according to the cultural practices most prevalent in raising the particular crop. The boundaries of the production regions for one crop, therefore, are not necessarily the same as those for another crop.

TABLE 51.--FLAX PRODUCTION COSTS, UNITED STATES

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	6.65	5.85	5.68
FERTILIZER	2.35	2.86	3.13
CHEMICALS	2.05	2.17	2.39
CUSTOM OPERATIONS	1.05	1.22	1.18
LABOR	5.91	6.21	7.18
FUEL AND LUBRICATION	5.01	7.09	8.26
REPAIRS	5.17	5.65	6.54
INTEREST	.65	1.18	1.42
TOTAL	29.04	32.23	35.78
MACHINERY OWNERSHIP:			
REPLACEMENT	14.55	15.29	18.01
INTEREST	8.60	11.66	14.96
TAXES AND INSURANCE	2.08	2.23	2.60
TOTAL	25.23	29.18	35.57
FARM OVERHEAD	7.46	6.95	7.70
MANAGEMENT	6.17	6.84	7.91
TOTAL, EXCLUDING LAND	67.90	75.20	86.96
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	38.83	50.16	55.68
COMPOSITE, ACQUISITION VALUE	18.22	21.53	22.89
	BUSHELS		
YIELD PER PLANTED ACRE	13.2	10.2	12.1
	DOLLARS PER BUSHEL		
VARIABLE	2.20	3.16	2.96
TOTAL, EXCLUDING LAND	5.14	7.37	7.19
TOTAL TO A RENTER:			
SHARE RENTER	7.51	10.58	10.53
CASH RENTER	6.99	10.00	9.43
AVERAGE RENTER	7.25	10.30	9.98
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	8.25	12.63	12.22
COMPOSITE, ACQUISITION VALUE	6.57	9.60	9.30
	PERCENT		
PRODUCTION COVERED	99.9	99.8	100.0

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

Cost comparisons between 1980 and 1981 are affected by the serious drought in 1980. For instance, the 50-percent increase in ginning costs in 1981 was primarily due to the 44-percent increase in yield. Fuel, lubrication, repair, labor, and machinery ownership costs increased in 1981 since harvest operations increased on a per acre basis. In 1980, 91.4 percent of the national planted acreage was harvested compared with 96.9 percent in 1981. Also, the extra yield required additional hauling. The costs of producing cotton in the United States and the four major cotton-producing regions are summarized in tables 52 to 56.

Fertilizer costs increased by almost 20 percent in 1981 because of increased application of nitrogen and phosphates and increased prices of all fertilizer elements. Increases in machinery prices and interest rates were also important cost factors, as with other crops.

The cotton yield rose in all the major producing regions in 1981. The yield rose by 84 percent in the Southern Plains, 55 percent in the Southeast, 32 percent in the delta, and 13 percent in the irrigated Southwest. These yield increases were enough to reduce per pound costs in 1981, compared with 1980, in all the regions except the Southwest. On a national basis, nonland costs per pound dropped from 94.3 cents to 79.8 cents. The Southeast had the highest cost per pound, despite its excellent yield in 1981.

The value of cottonseed dropped in 1981 because of declining prices. This reduced the value of the seed to 7 cents per pound of lint. After considering the value of seed, the national average cost, including land, fell in 1981 by about 12 cents per pound.

Figure 12

Cotton Production Regions

States are grouped in production regions according to the cultural practices most prevalent in raising the particular crop. The boundaries of the production regions for one crop, therefore, are not necessarily the same as those for another crop.

TABLE 52.--COTTON PRODUCTION COSTS, UNITED STATES

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	6.23	6.27	7.12
FERTILIZER	14.44	17.79	21.28
LIME	.35	.48	.58
CHEMICALS	34.92	37.31	42.59
CUSTOM OPERATIONS	8.87	9.82	11.21
LABOR	37.15	39.07	44.52
FUEL AND LUBRICATION	27.43	35.10	41.61
REPAIRS	25.64	28.42	33.36
GINNING	41.10	33.48	50.31
PURCHASED IRRIGATION WATER	3.88	3.94	4.40
INTEREST	5.66	7.70	9.93
TOTAL	205.67	219.38	266.91
MACHINERY OWNERSHIP:			
REPLACEMENT	42.74	46.22	54.09
INTEREST	25.36	33.58	43.81
TAXES AND INSURANCE	5.70	6.23	7.23
TOTAL	73.80	86.03	105.13
FARM OVERHEAD	8.88	9.53	10.54
MANAGEMENT	28.84	31.49	38.26
TOTAL, EXCLUDING LAND	317.19	346.43	420.84
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	66.41	71.24	84.66
COMPOSITE, ACQUISITION VALUE	43.88	36.63	41.38
	POUNDS		
YIELD PER PLANTED ACRE	502.4	367.2	527.4
	DOLLARS PER POUND		
VARIABLE	0.409	0.597	0.506
TOTAL, EXCLUDING LAND	.631	.943	.798
TOTAL TO A RENTER:			
SHARE RENTER	.744	1.265	.906
CASH RENTER	.746	.990	.964
AVERAGE RENTER	.745	1.113	.935
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	.770	1.162	.989
COMPOSITE, ACQUISITION VALUE	.721	1.060	.899
VALUE OF SECONDARY PRODUCT	.099	.108	.070
	PERCENT		
PRODUCTION COVERED	100.0	99.9	99.9

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 53.--COTTON PRODUCTION COSTS, DELTA

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	5.47	5.75	6.57
FERTILIZER	22.33	28.71	31.11
LIME	1.01	1.28	1.35
CHEMICALS	60.43	63.55	70.64
CUSTOM OPERATIONS	9.25	10.63	11.49
LABOR	31.12	33.38	36.08
FUEL AND LUBRICATION	18.73	24.77	30.07
REPAIRS	35.22	40.96	45.24
GINNING	39.11	29.93	39.74
INTEREST	5.51	7.57	9.85
TOTAL	228.18	246.53	282.14
MACHINERY OWNERSHIP:			
REPLACEMENT	51.99	57.11	63.20
INTEREST	31.78	43.23	55.07
TAXES AND INSURANCE	7.71	8.68	9.48
TOTAL	91.48	109.02	127.75
FARM OVERHEAD	8.55	8.23	9.12
MANAGEMENT	32.82	36.38	41.90
TOTAL, EXCLUDING LAND	361.03	400.16	460.91
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	71.54	80.63	89.52
COMPOSITE, ACQUISITION VALUE	49.39	46.43	48.23
	POUNDS		
YIELD PER PLANTED ACRE	570.2	393.8	518.7
	DOLLARS PER POUND		
VARIABLE	0.400	0.626	0.544
TOTAL, EXCLUDING LAND	.633	1.016	.889
TOTAL TO A RENTER:			
SHARE RENTER	.817	1.385	1.191
CASH RENTER	.735	1.141	.991
AVERAGE RENTER	.766	1.230	1.064
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	.760	1.243	1.085
COMPOSITE, ACQUISITION VALUE	.718	1.151	1.000
VALUE OF SECONDARY PRODUCT	.104	.106	.064
	PERCENT		
PRODUCTION COVERED	20.9	21.8	21.6

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 54.--COTTON PRODUCTION COSTS, SOUTHEAST

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	6.12	5.50	6.17
FERTILIZER	30.02	40.54	41.34
LIME	3.75	4.62	5.24
CHEMICALS	87.87	93.34	101.47
CUSTOM OPERATIONS	12.54	13.82	15.37
LABOR	25.70	27.44	30.83
FUEL AND LUBRICATION	17.71	24.56	30.23
REPAIRS	35.73	41.56	47.59
GINNING	33.37	24.50	39.01
INTEREST	6.85	9.42	11.81
TOTAL	259.66	285.30	329.06
MACHINERY OWNERSHIP:			
REPLACEMENT	56.42	61.98	71.16
INTEREST	35.10	46.81	60.94
TAXES AND INSURANCE	8.76	9.87	11.14
TOTAL	100.28	118.66	143.24
FARM OVERHEAD	8.44	6.12	6.84
MANAGEMENT	36.84	41.01	47.91
TOTAL, EXCLUDING LAND	405.22	451.09	527.05
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	56.75	64.43	72.46
COMPOSITE, ACQUISITION VALUE	34.91	34.60	37.18
		POUNDS	
YIELD PER PLANTED ACRE	490.4	344.1	532.5
	DOLLARS PER POUND		
VARIABLE	0.529	0.829	0.618
TOTAL, EXCLUDING LAND	.826	1.311	.990
TOTAL TO A RENTER:			
SHARE RENTER	.957	1.373	1.180
CASH RENTER	.922	1.510	1.071
AVERAGE RENTER	.932	1.467	1.101
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	.952	1.531	1.148
COMPOSITE, ACQUISITION VALUE	.906	1.440	1.078
VALUE OF SECONDARY PRODUCT	.085	.090	.065
		PERCENT	
PRODUCTION COVERED	4.3	4.4	5.4

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 55.--COTTON PRODUCTION COSTS, SOUTHERN PLAINS

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	6.51	6.41	7.45
FERTILIZER	8.11	8.82	11.47
CHEMICALS	10.88	11.62	12.66
CUSTOM OPERATIONS	4.01	4.55	5.41
LABOR	29.52	31.28	37.30
FUEL AND LUBRICATION	20.09	26.46	31.49
REPAIRS	15.96	16.76	20.21
GINNING	32.03	21.51	39.91
PURCHASED IRRIGATION WATER	.08	.10	.11
INTEREST	3.74	5.26	6.80
TOTAL	130.93	132.77	172.81
MACHINERY OWNERSHIP:			
REPLACEMENT	30.11	32.31	38.72
INTEREST	17.54	23.25	30.57
TAXES AND INSURANCE	3.83	4.04	4.81
TOTAL	51.48	59.60	74.10
FARM OVERHEAD	7.04	8.89	9.85
MANAGEMENT	18.95	20.13	25.68
TOTAL, EXCLUDING LAND	208.40	221.39	282.44
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	42.03	40.27	47.26
COMPOSITE, ACQUISITION VALUE	27.93	18.12	22.52
	POUNDS		
YIELD PER PLANTED ACRE	348.6	201.0	369.4
	DOLLARS PER POUND		
VARIABLE	0.376	0.660	0.468
TOTAL, EXCLUDING LAND	.598	1.101	.765
TOTAL TO A RENTER:			
SHARE RENTER	.718	1.343	.920
CASH RENTER	.619	1.364	.845
AVERAGE RENTER	.705	1.345	.911
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	.728	1.382	.942
COMPOSITE, ACQUISITION VALUE	.681	1.254	.864
VALUE OF SECONDARY PRODUCT	.098	.102	.070
	PERCENT		
PRODUCTION COVERED	42.3	32.9	40.4

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

TABLE 56.--COTTON PRODUCTION COSTS, SOUTHWEST

ITEM	1979	1980	1981 1/
	DOLLARS PER PLANTED ACRE		
VARIABLE:			
SEED	6.09	6.69	7.00
FERTILIZER	24.95	32.10	37.63
CHEMICALS	81.43	88.15	96.12
CUSTOM OPERATIONS	25.63	28.90	31.79
LABOR	75.61	82.42	89.82
FUEL AND LUBRICATION	67.36	88.00	101.86
REPAIRS	48.20	54.52	61.70
GINNING	79.34	90.12	110.17
PURCHASED IRRIGATION WATER	23.54	26.34	29.05
INTEREST	12.72	17.25	21.45
TOTAL	444.87	514.49	586.59
MACHINERY OWNERSHIP:			
REPLACEMENT	75.74	83.00	94.02
INTEREST	44.69	58.20	72.37
TAXES AND INSURANCE	9.57	10.62	11.91
TOTAL	130.00	151.82	178.30
FARM OVERHEAD	16.26	15.03	16.63
MANAGEMENT	59.11	68.13	78.15
TOTAL, EXCLUDING LAND	650.24	749.47	859.67
LAND ALLOCATION: 2/			
COMPOSITE, CURRENT VALUE	154.41	186.88	226.62
COMPOSITE, ACQUISITION VALUE	99.75	99.34	105.77
	POUNDS		
YIELD PER PLANTED ACRE	1003.6	1016.3	1150.1
	DOLLARS PER POUND		
VARIABLE	0.443	0.506	0.510
TOTAL, EXCLUDING LAND	.648	.737	.747
TOTAL TO A RENTER:			
SHARE RENTER	.760	.866	.875
CASH RENTER	.758	.848	.853
AVERAGE RENTER	.758	.852	.857
TOTAL, INCLUDING LAND: 2/			
COMPOSITE, CURRENT VALUE	.802	.922	.953
COMPOSITE, ACQUISITION VALUE	.745	.833	.843
VALUE OF SECONDARY PRODUCT	.097	.116	.075
	PERCENT		
PRODUCTION COVERED	32.5	40.8	32.5

1/ PRELIMINARY.
2/ INCLUDES AVERAGE OF SHARE RENT, CASH RENT, AND CHARGE BASED ON CURRENT OR ACQUISITION VALUE OF OWNER-OPERATOR LAND.

COST-ESTIMATING METHODS

The cost estimates presented in this report—and in the other cost of production reports—are based on a set of national and regional budgets. The budgets are prepared using cost-estimating procedures developed by Economic Research Service (ERS) staff stationed at Oklahoma State University.[2]

The primary data used to develop the enterprise budgets are obtained from producer surveys. The estimates in this report are based on the 1978 survey of the 750 peanut producers; the spring 1979 survey of 5,460 cotton, feed grains, wheat, flax, sunflower, and soybeans producers; and the fall 1979 survey of 500 rice producers.

In general, one crop budget is developed for each major producing State. However, in States where more than one production technology is used, such as irrigation and summer fallow, additional budgets are developed to reflect each major technology. The number of budgets used to estimate costs for each crop are:

	Number of budgets
Corn	27
Sorghum	17
Barley	25
Oats	13
Wheat:	
Hard Red Winter	26
Soft Red Winter	17
Hard Red Spring	8
Durum	6
White	9
Rice	7
Soybeans	22
Sunflower	3
Peanuts	9
Flax	3
Cotton	16

These 208 budgets were processed using standard farm management budgeting procedures.

The budgets include variable costs, machinery ownership costs, and general farm overhead costs. Variable costs include expenditures for seed, fertilizer, chemicals, custom operations, labor, fuel and lubricants, repairs, interest, crop drying, and miscellaneous items. Machinery ownership costs include charges for replacement, interest, insurance, and taxes. General farm overhead includes recordkeeping, utilities, general farm maintenance, and similar items that are difficult to allocate to a specific enterprise. Two additional cost components, management and land, are also reported. The management charge is computed as 10 percent of the total variable, machinery ownership, and general farm overhead costs.

Land charges are estimated six ways to represent varying tenure arrangements.

Share rent costs are estimated using the value of the average crop share less the landlords, share of costs for seed, fertilizer, chemicals, ginning, crop drying, irrigation, and custom work as reported in "U.S. Cropland Rental Practices."[3]

[2] Research budgets are available upon request from Ronald D. Krenz, Department of Agricultural Economics, Oklahoma State University, Stillwater, Okla. 74078. These budgets are updated annually with 1980 budgets now available.

[3] U.S. Cropland Rental Practices, ESCS–46, Pat Weisgerber, Economics, Statistics, and Cooperatives Service, U.S. Department of Agriculture, February 1979.

Cash rent is estimated by using the rental rates obtained in the 1978 cost of production survey as a base and adjusting to 1979, 1980, and 1981 by the index of rents as reported by ERS.[4]

The current value allocation is for the operator who owns the land and values it at the current market rate.

The average acquisition allocation represents an estimate based on land valued at the time of acquisition.[5]

Cropland values for 1980 and 1981, reported by crop reporting district, are weighted by crop acreages in these districts to produce a land value estimate for each crop in each State. The land value derived in this way is then multiplied by the average annual interest rate charged for real estate loans by Federal land banks to give an annual allocation (CD–86, op. cit.). Average farm real estate taxes are added to the owned land estimates.[6]

The composite land allocation at current value is a weighted average of the share rent, the cash rent, and the owner-operated land allocation using current land values. These three categories of land return are weighted together according to the proportion of each crop produced under each tenure situation as reported in the 1978 survey. Similarly, the land allocation at acquisition value is a weighted average of the share rent, the cash rent, and the acquisition allocation for the owner-operator.

The yields used for cost of production estimates are based on acres planted. Yields per planted acre are determined by dividing total production by the acreage planted. The other method, yield per harvested acre, is determined by dividing total production by acreage harvested.

The costs of tilling and planting acres that are not harvested may be overlooked if costs are determined on a harvested acre basis. All costs are included when they are estimated on a planted acre basis including preplant tillage, planting, postplant tiliage, chemical applications, and harvesting for that portion of the crop that is harvested. Thus, costs per unit produced can be more accurately reflected by using planted acre yields.[7] Converting planted acre costs to harvested acre costs requires a separation of harvesting costs from all other costs and an estimate of the proportion of the planted acres that are harvested.

Costs of custom operations include costs of custom harvesting and custom application of chemicals and fertilizer. In the 1978 cost of production survey, producers, were asked to report total exepnditures for pesticides, including custom application, as one lump sum. In these budgets, most custom chemical application costs are included in the estimates of pesticide expenditures.

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[4] Farm Real Estate Market Developments, CD–86, Economic Research Service, U.S. Department of Agriculture, August 1981.

[5] The method of computing the average acquisition value is detailed in the 1974 cost of production report. Basically, it is as follows: approximately 3 percent of the farmland is sold each year. Theoretically, all land would, therefore, change ownership over a 35-year period. The average per acre cropland values over the period 1946–80 were determined for each State. This average was divided by the 1980 State cropland value to obtain an index for each State. To determine the estimated acquisition value of the cropland for each crop in each State, the 1980 and 1981 land values calculated for each crop, as discussed previously, were multiplied by the acquisition value indexes for each State.

[6] Farm Real Estate Taxes—1979, SB–666, Economics and Statistics Service, U.S. Department of Agriculture, May 1981.

[7] A significant portion of corn and sorghum acreage is harvested for forage and silage. Hence, the total of the acreage harvested for grain, forage, and silage is divided by the total planted acreage to obtain an estimate of the overall percentage harvested. This is to adjust harvest yields to the planted acre basis. A considerable portion of the acreage of small grain crops, especially in the Southern States, is planted for purposes other than for harvest as grain. Data on the acreage harvested for these other purposes are not available. Hence, an estimate must be made of the overall percentage of harvest.

As a result, most of the custom charges reported here are for custom harvesting. The percentage custom harvested and the custom rates are both obtained from the three cost-of-production surveys mentioned above. Custom rates are adjusted for the 1979, 1980, and 1981 estimates according to price changes.

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